



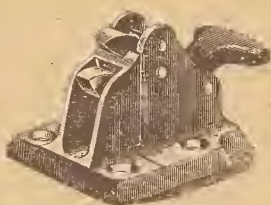


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CONTENTS.

EDITORIAL:	PAGE
Advisability of Separate Contracts for Government Work—A Suit for Damages in a Public Competition—Russell Sturgis Upon Architectural Education.....	1
THE EDUCATION OF AN ARCHITECT:	
By Russell Sturgis	2
ELECTRICITY IN THE PROVINCE OF THE ARCHITECT:	
By Albert W. Hayward.....	4
PROGRAMME FOR THE FIRST COMPETITION FOR BUILDINGS FOR THE PARIS EXPOSITION OF 1900.....	5
JOHN STEWARDSON MEMORIAL SCHOLARSHIP COMPETITION...	6
ASSOCIATION NOTES:	
The Architectural League of New York—St. Louis Architectural Club—New Jersey Society of Architects—Baltimore Draftsmen—Exhibition of Pittsburg Chapter A. I. A.—Special Committees of A. I. A. for 1898—National Sculpture Society—Chicago Architectural Club ..	7
NEW PUBLICATIONS:	
Pocket Handbook of Luxfer Prisms.....	8
OBITUARY:	
James Freret	8
OUR ILLUSTRATIONS.....	9
MOSAICS	9
PERSONAL.....	9
SYNOPSIS OF BUILDING NEWS	9
INDEX TO ADVERTISEMENTS	XI

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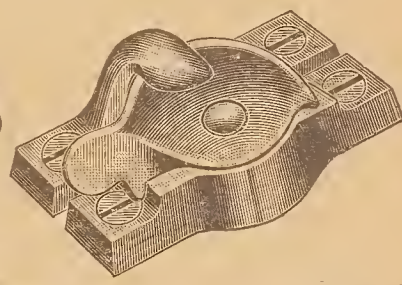
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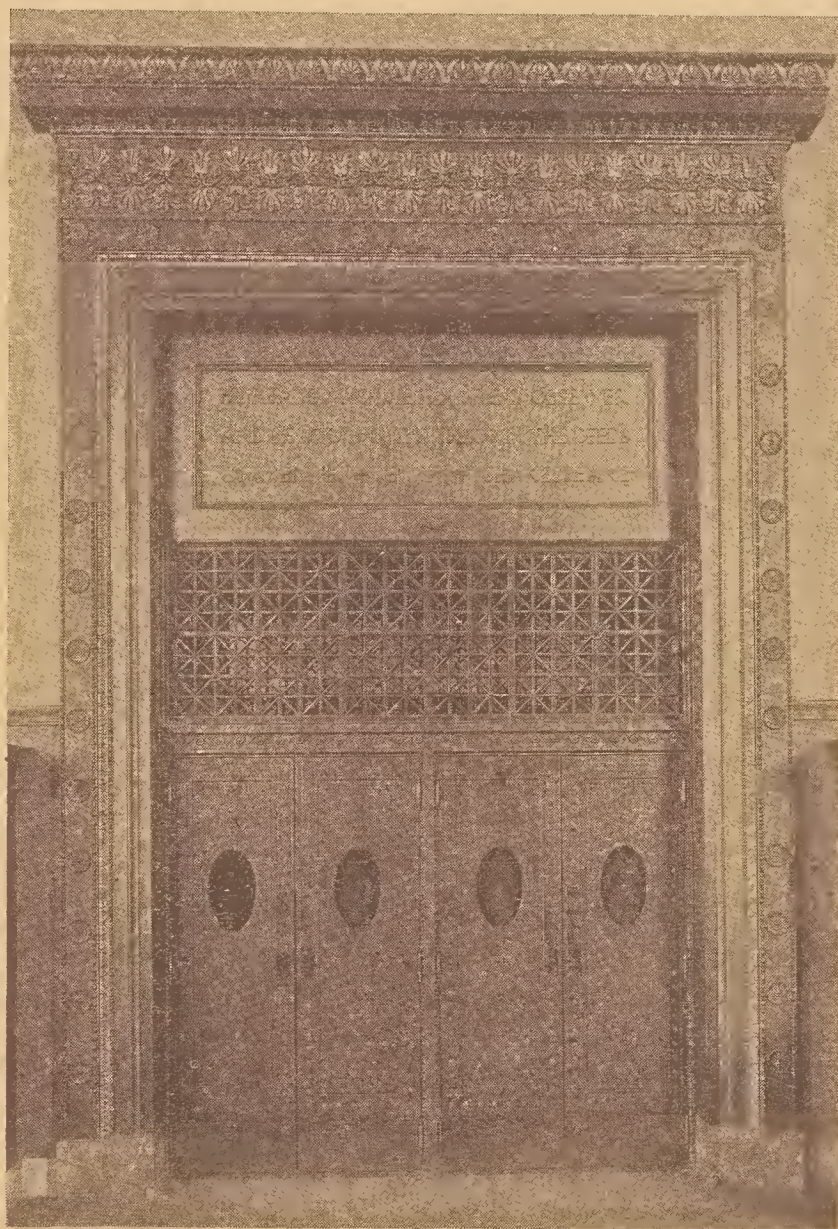
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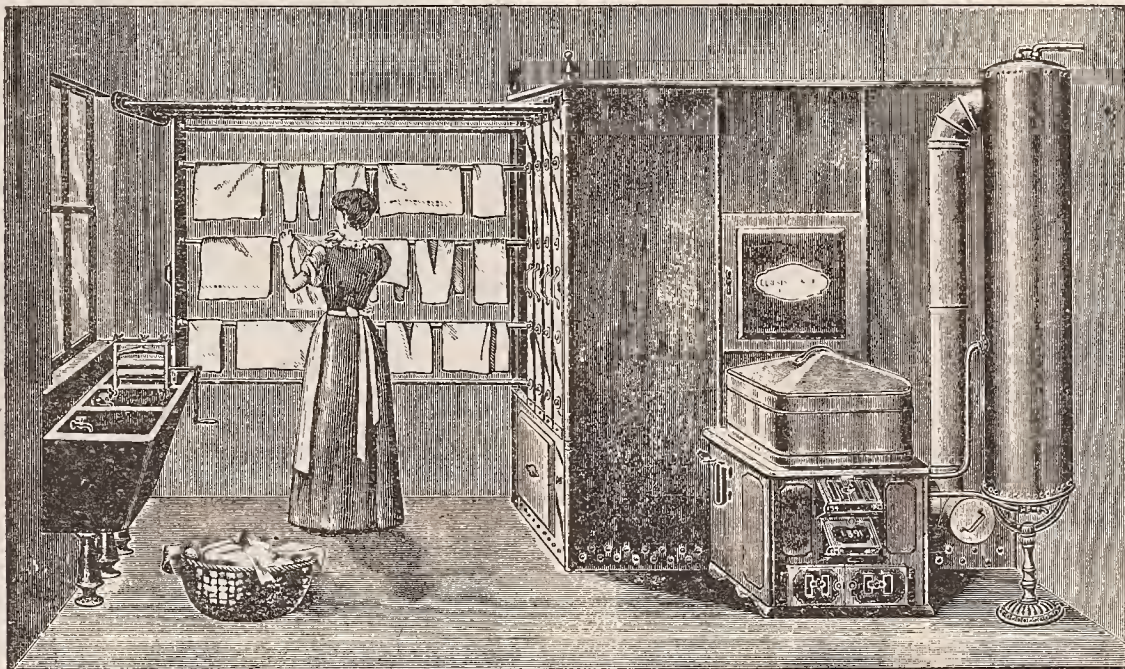
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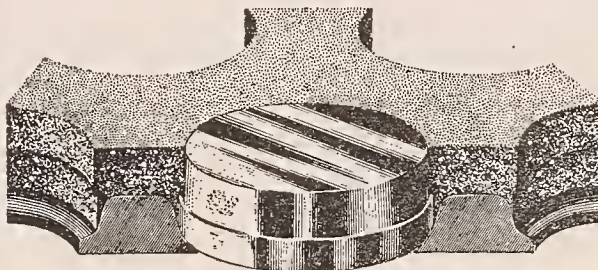
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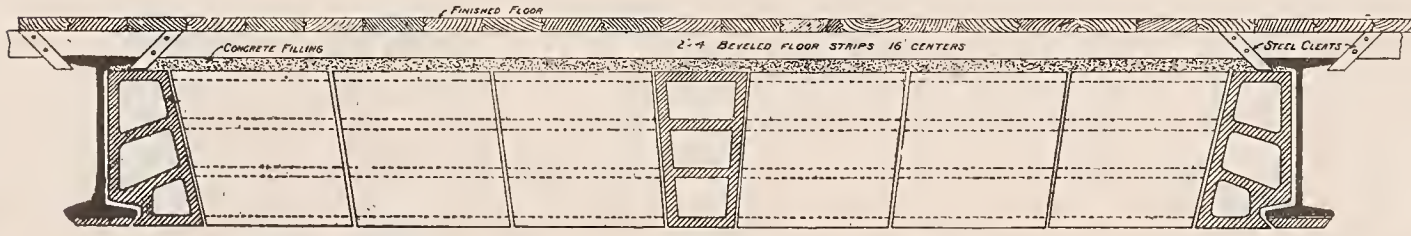
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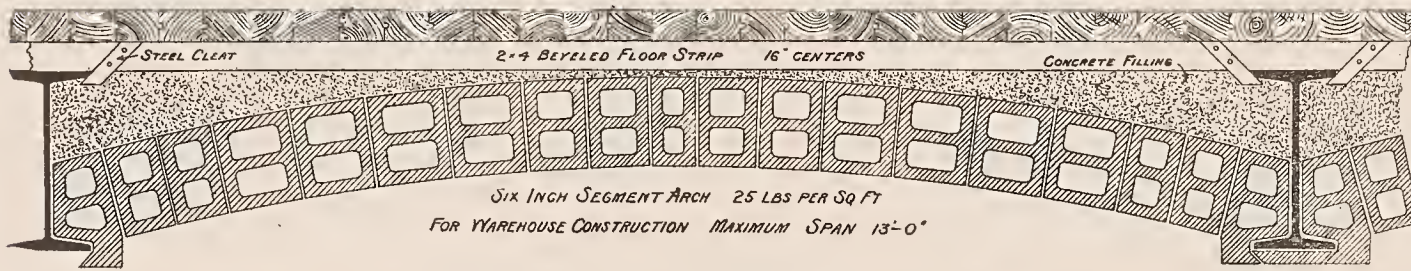
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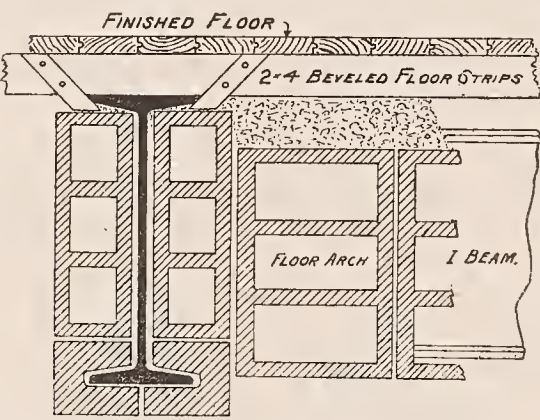
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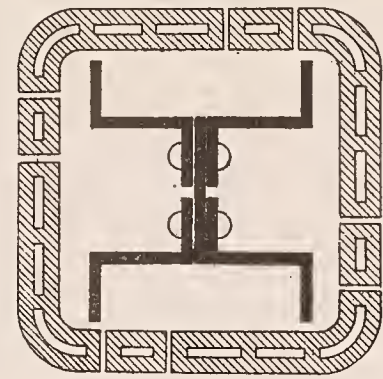
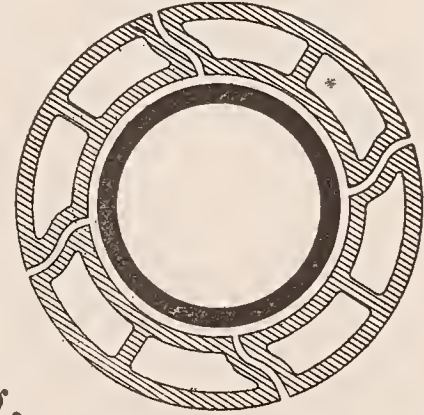
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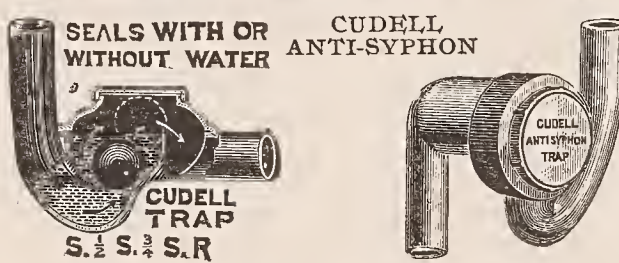
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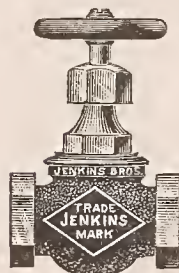
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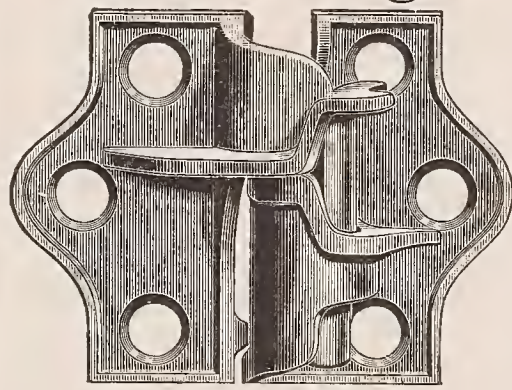
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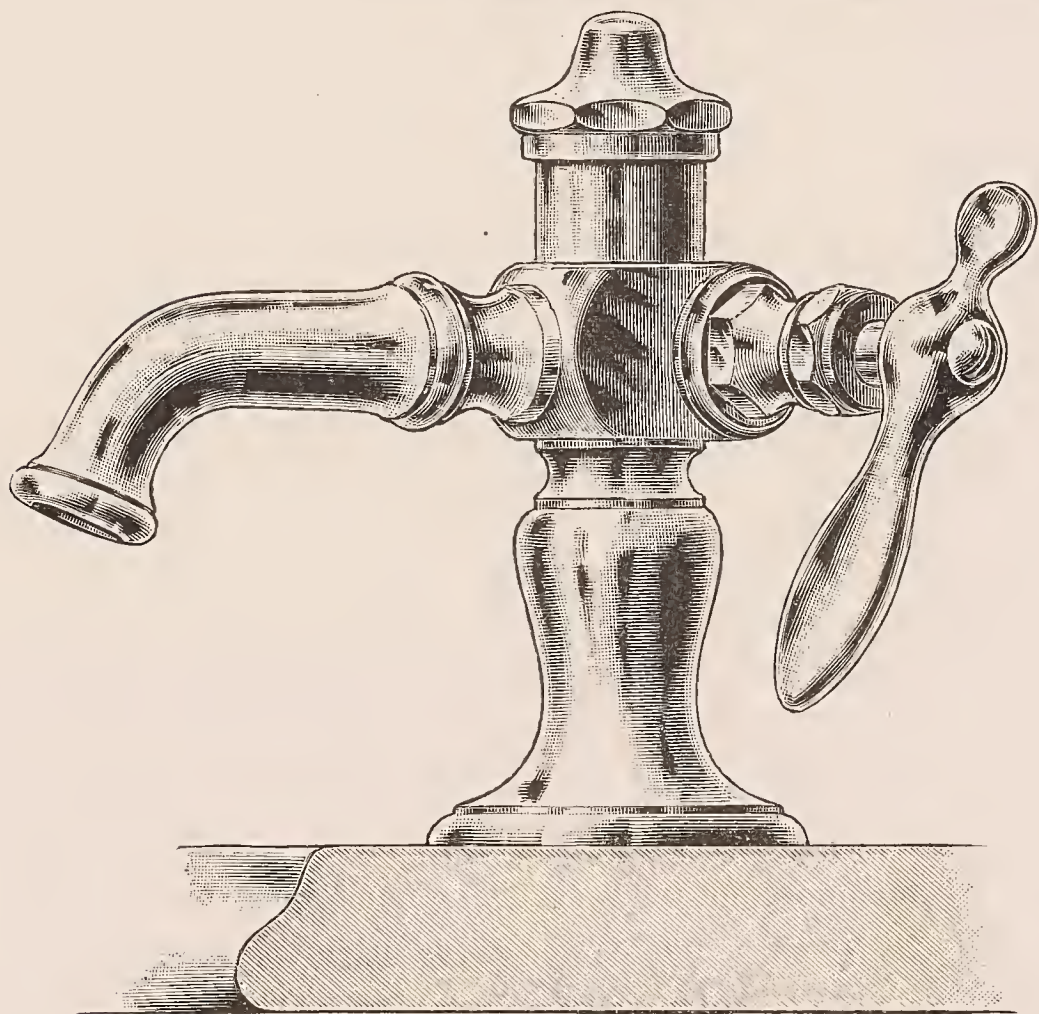
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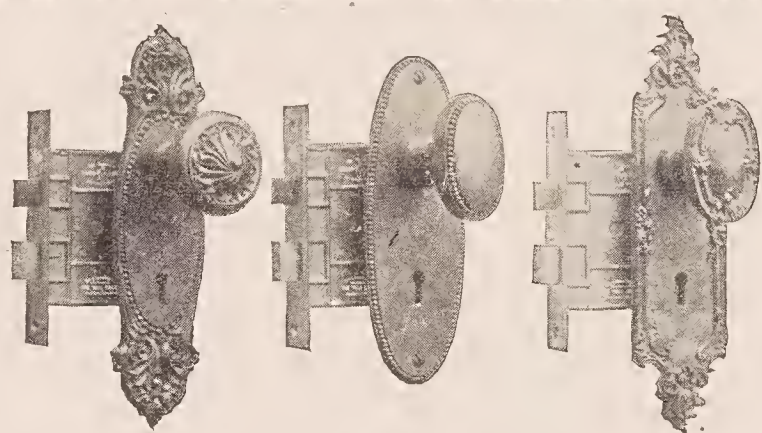
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INDEX TO ADVERTISEMENTS.

	Page		Page		Page		Page
Architects' Directory.		Building Papers.		Hot-Water Heaters.		Sash Cords and Chains.	
Comstock, W. T.	IX	Cabot, Samuel ...	II	American Boiler Co.	XIV	Smith & Egge Mfg. Co.	XIV
Architectural Books.		Cements.		Wilks, S., Mfg. Co.	IX	Samson Cordage Works.	XVIII
Inland Publishing Co.	II	Commercial Wood & Cement		Interior Decorators.		Sash Locks.	
Architectural Drawing.		Co.	XIV	Hill Art Glass and Decora-		Gale Automatic.	II
Deane, E. Eldon.	VII	Meacham & Wright.	IX	tive Co.	X	The W. & E. T. Fitch Co.	II
Architectural Ironworks.		Thiele, E.	IX	Laundry Dryers.		Shingle Stain.	
The Winslow Bros. Co.	II	Concrete Construction.		Chicago Clothes Dryer Wks.	III	Cabot, Samuel.	III
The Champion Iron Co.	XIII	Simpson Bros. Co.	IV	Locks.		Dexter Bros.	XVI
Architectural Journals.		Contracts.		Norwalk Lock Co.	VIII	Wadsworth-Howland Co.	XVIII
<i>Architecture and Building..</i>	IX	Standard or Uniform.	XIV	The Yale & Towne Mfg. Co.	XVIII	Sidewalk and Vault Lights.	
Architectural Photographers.		Cordage.		Mail Chutes.		Brown Bros. Mfg. Co.	V
Taylor, J. W.	II	Samson Cordage Works.	XVIII	Cutler Manufacturing Co.	XV	Dauchy & Co.	IV
Torgersen, H. E., & Co.	XII	Creosote Stains.		Metal Ceilings.		Richards & Kelly.	XIII
Architectural Schools.		Cabot, Samuel.	III	Northrop, A., & Co.	VII	Skylights, Conservatories, Etc.	
Columbia University.	XII	Doors and Winding Partitions.		Mortar Colors.		Miller, Jas. A., & Bro.	IX
Taught by Mail.	V	Dodge, H. B., & Co.	V	French, S. H., & Co.	IX	Snow Guards.	
Architectural Views.		Drawing Material and Implements.		Moldings, Mirrors, Frames.		Folsom Snow Guard Co.	IX
Taylor, J. W.	II	Abbott, A. H., & Co.	XII	Geo. C. Mages Company.	XVI	Spring Hinges.	
Bicycles.		Dryers.		Oil Heaters.		Smith & Egge Mfg. Co.	XIV
Gladiator.	III	Chicago Clothes Dryer Wks.	III	Barler, A. C., Mfg. Co.	XVI	Stained and Decorative Glass.	
Blind Hinge.		Ejector for Urinals.		Paints, Oils and Varnishes.		Androvette, Geo. E., & Co.	IX
Stover Mfg. Co.	XV	Putnam, J. S.	VIII	Aquila Rich Co.	V	Flanagan & Biedenweg.	V
Blinds (Venetian and Hill's Sliding.)		Electrical Equipments.		Joseph Dixon Crucible Co.	XIII	Healy & Millet.	XIII
Dodge, H. B., & Co.	V	Pioneer Electric Works.	X	Wadsworth-Howland Co.	XVIII	Hill Art Glass and Decora-	
Boiler Covering.		Electroliers.		Pencils.		tive Co.	X
Johns, H. W., Mfg. Co.	IX	Graham Bros.	IV	Joseph Dixon Crucible Co.	XIII	Lamb, J. & R.	VIII
The Keasbey & Mattison Co.	XII	Vosburgh Mfg. Co.	IX	Perspectives.		McCully Glass Co.	IX
Books (Scientific).		Elevators.		Care INLAND ARCHITECT.	IV	Steam and Hot Water Heating.	
Montgomery Ward & Co.	IV	Crane Elevator Co.		Photographers.		American Boiler Co.	XIV
Brass Bedsteads.		The J. W. Reedy Elevator		Torgersen, H. E., & Co.	XII	Pease, J. F., Furnace Co.	II
Adams & Westlake Co.	VII	Co.	XVI	Photogravure Reproductions.		Prentice, L. H., Co.	XIV
Bricks (Pressed).		Union Elevator and Ma-		Chicago Photogravure Co.	XIII	The Babcock & Wilcox Co.	XVII
Chicago Hydraulic Press		chine Co.	V	Inland Publishing Co.	V	Steam Separators.	
Brick Co.	XVII	Feed-Water Heaters.		Plumbing Supplies.		The Goubert Mfg. Co.	XIV
Findlay Hydraulic Press		The Goubert Mfg. Co.	XIV	Randolph & Clowes.	XII	Steel Butts.	
Brick Co.	XVII	Fireplace Builder.		Smith & Anthony Co.	IV	The Stanley Works.	XII
Illinois Hydraulic Press		King, Molesworth.	XIII	Wolff, L., Mfg. Co.	X	Steel Shutters.	
Brick Co.	XVII	Fireproofing.		Portland Cement.		Clark, Bunnett & Co.	IX
Kansas City Hydraulic Press		Expanded Metal.	XVIII	Dyckerhoff.	IX	Stone.	
Brick Co.	XVII	Hearnshaw Fireproof Par-		Saylor's Portland.	XIV	Bedford Quarries Co.	XII
Northern Hydraulic Press		tition Co.	XIII	Printers.		Temperature Regulator.	
Brick Co.	XVII	Illinois Terra-Cotta Lumber		The H. O. Shepard Co.	IV	The Powers Regulator Co.	XIV
Omaha Hydraulic Press		Co.	VII	Radiators.		Terra-Cotta.	
Brick Co.	XVII	Mackolite Fireproofing Co.	VII	American Radiator Co.	III	Northwestern Terra-Cotta	
St. Louis Hydraulic Press		Pioneer Fireproof Construc-		Fowler Radiator Co.	XVIII	Works.	II
Brick Co.	XVII	tion Co.	VI	Prentice, L. H., Co.	XIV	Winkle Terra Cotta Co.	VI
Tiffany Enameled Brick Co.	XIII	Fireproof Doors.		Railroads.		Valves (Steam).	
Brick (Enameled).		Fireproof Door Co.	XVIII	Big Four Route.	XVI	Jenkins Bros.	VIII
Tiffany Enameled Brick Co.	XV	Foreign Views.		Chicago & Alton.	IV	Monash, C. P.	V
Hydraulic Press Brick Co.	XVII	Inland Publishing Co.		Chicago, Burlington &		Ventilation.	
Brick (Ornamental).		Furnaces and Ranges.		Quincy.	XIV	Buffalo Forge Co.	XVIII
Chicago Hydraulic Press		Magee Furnace Co.	III	Chicago, Milwaukee & St.		Water Color Perspectives.	
Brick Co.	XVII	Galvanized Iron Works.		Paul.	X	Buck, Lawrence.	III
Findlay Hydraulic Press		Apollo Iron & Steel Co.	VIII	Grand Trunk Lines.	XVI	Water Heaters.	
Brick Co.	XVII	Miller, James A., & Bro.	IX	Illinois Central.	IV	S. Wilks Mfg. Co.	IX
Hydraulic Press Brick Co.	XVII	Gas and Electric Combina-		Monon and C. H. & D. Route		American Boiler Co.	XIV
Illinois Hydraulic Press		tion Fixtures.		Queen and Crescent Route.	XII	Weather Vanes.	
Brick Co.	XVII	Graham Bros.	IV	Southern Railway.		Jones, Thomas W.	IX
Kansas City Hydraulic Press		Vosburgh Mfg. Co., Limited	IX	Wisconsin Central.	IV	Window Blinds.	
Brick Co.	XVII	Glass— Illuminating.		Reflectors.		Geo. Poppert Mfg. Co.	XV
Northern Hydraulic Press		Luxfer Prism Co.	XIII	Frink, I. P.	V	Window Lines.	
Brick Co.	XVII	Glass— Plate.		Roofers and Roofing Material.		Samson Cordage Works.	XVIII
Omaha Hydraulic Press		Pittsburg Plate Glass Co.	XIII	Apollo Iron & Steel Co.	VIII	Wood Carpet.	
Brick Co.	XVII	Half-Tone Engraving.		Follansbee Bros. Company.	IV	Chicago Floor Co.	XV
Philadelphia & Boston Face		Inland Publishing Co.	V	Johns, H. W., Mfg. Co.	IV	Moore, E. B., & Co.	VII
Brick Co.	II	Heating.		Merchant & Co.	VIII	The Interior Hardwood Co.	IV
Tiffany Enameled Brick Co.	XV	American Boiler Co.	XIV	Miller, James A., & Bro.	IX		
Builders' Hardware.		Buffalo Forge Co.	XIII	Taylor, N. & G., Co.	VI		
Norwalk Lock Co.	VIII	Heating and Ventilating Apparatus.		Sanitary Appliances.			
Orr & Lockett.	XVIII	American Boiler Co.	XIV	E. Baggot.	VIII		
The Stanley Works.	XII	Buffalo Forge Co.	XIII	Flush Tank Co.	VII		
The Yale & Towne Mfg. Co.	XII	Hinges.		Cudell, F. E.	VII		
Builders' Sundries.		Stover Manufacturing Co.	VIII	Steel Bath Mfg. Co.	XVI		
Building Contracts.	XII			Wolff, L., Mfg. Co.	X		
Institute of Building Arts.				W. Gordon Miller Co.	VII		
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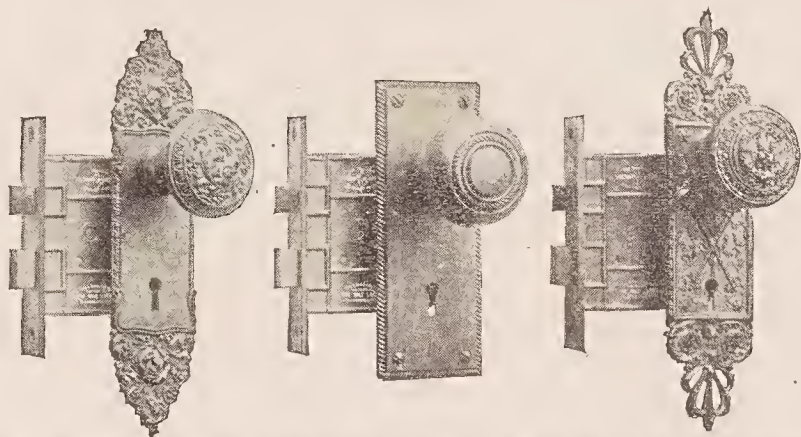
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Separate Contracts on Government Work.

Notwithstanding the inclination evinced by Secretary of the Treasury Gage to let government contracts to general contractors, it is possible that sufficient reasons will be placed before him to at least modify this proposed plan. The general contractor is a "middle man," whose large capital enables him to give adequate bonds and whose profits must come in the nature of a general "shave" from all actual contractors on the work. This in itself is pernicious, for while it relieves the Government of a certain amount of detailed superintendence, it cannot but handicap the efforts of honest contractors, and induces those not so honest to "skin" their work so as to pay a percentage to the general contractor and secure a profit themselves. In the case of the government building at Chicago, seventy-five per cent of the entire contract will be for granite. This will be awarded one of the two or three concerns in the United States capable of complying with the specification conditions. All other contracts should be let separately, for they are all large and only the most complete plants can figure in the competitions. No speculator should be given an opportunity to secure figures from these and then shave that price and expect to give first-class service to the Government. It is therefore wisdom to let each of the several large contracts direct, and though the initial cost may be more and the Government apparently secured by a large indemnifying bond, the thoroughness of execution and the certainty of stable work should fully outweigh all such considerations.

A Suit for Damages in a Public Competition.

A case at law in which architects generally are interested is now being tried in New Hampshire. It seems that some two years ago certain trustees invited four architects to prepare competitive sketches for a town hall. Subsequently the plans were received and the trustees reported that the plans came within the required estimate and the competitors were instructed to prepare plans and estimates. These were delivered by the competitors by the time specified. About this time the trustees were induced to admit other competitors and an expert was engaged to adjudicate the competition. The four architects immediately claimed a break in the contract and the trustees were instructed to carry out the original agreement and give the work to one of the four competitors. This they refused to do and awarded the design to another architect. Now one of the original competitors sues for damages.

Russell Sturgis Upon Architectural Education.

The paper by Russell Sturgis, which we print from the *Atlantic Monthly*, has excited considerable comment, not only among the educational institutions of the country but among architects generally. Mr. Sturgis' claim that practically nothing has been done since the beginning of the century that is worth preserving is too broad to be allowed in its practical sense, for all action in a given direction forms the history of the whole; but there is much truth in his statement, and his criticisms upon architectural education are worthy of full consideration.

THE TRUE EDUCATION OF AN ARCHITECT.*

BY RUSSELL STURGIS.

IT is a commonplace that hard work is the best remedy for despondency, and that constant occupation tends to create optimistic views of the present and the future. In like manner, occupation and partly successful labor tend to blind the laborer to what is feeble or bad in his work. The mere fact of doing is so delightful that the doer is not always the best judge of the work done. In this way we account for the cheerful acquiescence of the practicing architects in that lifeless and thoughtless designing with the results of which they are filling the country. Practitioners of other fine arts find the architect's work hopelessly uninteresting, and say so to one another, and, hesitatingly to the man they think better informed than themselves—that is, to the architect. Hopeless dullness—that is the characteristic of so vast a proportion of our architectural work that it is hard to keep from saying that it is the characteristic of all; nor is there any considerable body of that architectural work to be excepted but the better class of wood-built country houses. These, being of American origin, and developed naturally out of our materials, our appliances and our requirements, are full of interest and are worthy of study.

The architects themselves, both the younger and the older ones, have a suspicion, indeed, that things are not right; at least, there are many among them who show at intervals that such a suspicion has crossed their minds. It is not uncommon to hear it said that one would like to design his own work, but that really he cannot afford it; that no doubt he takes all his ornament ready-made from the photographs he has purchased, but that this is the universal custom, he supposes. The fact of hard work and the consciousness of doing well what they are paid to do keep most architects from worrying too much about qualities which their clients do not ask for—nobility, or beauty, or even sincerity of design—and keep some architects from thinking of these matters at all; still, the consciousness of there being something amiss is very general in the profession. To those persons, not architects, who know something about ancient architecture, its glory, its charm, its beauty, and who have thought somewhat of modern possibilities, the miserable result attained by the outlay and the labor of the last twenty years is more obvious than it can be to the practicing architects; and these observers have a right to say, each man according to his temperament, "The outlook is hopeless," or, "Vigorous remedies are required." The methods by which architectural students have been educated are clearly inadequate; the traditions held before them are clearly false; the influences under which they have grown up are clearly pernicious. It remains to be seen whether a new departure and a more radical one may not be of use. The time may have come for abstract theorizing about the preparation of the young architect for his task.

What, then, should the young architect be taught?

First of all, he should be taught how to build. It is hardly supposable that this proposition will be seriously disputed, although in practice its truth is disregarded so generally that it becomes necessary to assert it once in a while. There is a growing tendency to treat the art of architecture as the art of making drawings, "rendered" in accordance with certain hard-and-fast rules; and it is as well to repeat that the business of the architect is to build. What is meant when it is asserted that the young architect must be taught how to build?

When any man calling himself "architect" or "builder," or merely acting as the amateur creator of his own home, prepares to put up a building of any sort, the primary necessity for him is to have a thorough understanding of the means at his disposal and the object which he proposes to attain. The material which he can control he should understand exceedingly well, and its possibilities. The building which he intends to erect he should see clearly in his mind's eye, and its construction. This requires that he shall know how stones and bricks are laid or set; how mortar is mixed and applied; how walls are bonded together; when anchors are needed which shall tie those walls to the floors, and whether it be ever possible to avoid the use of anchors; under what circumstances lintels may be safely used; how far corbels may be used to advantage; the conditions of an arch, its line of thrust (in a general way, for it is not always feasible to calculate the exact line of its sideways pressure); how gutters may best be carried at the head of the wall; what are the approved methods of attaching to the main structure such lighter and smaller pieces as bay window, carriage porch, or kitchen wing. He must know in a familiar way what a brick wall is, and what are the conditions of its being—solid, or hollow, or built with hollow bricks. In some of our States the masons have a theory that brickwork ought not to be laid up too solidly, nor so filled with mortar as to be one homogeneous mass, because such a mass transmits the moisture from the outer to the interior face. These masons prefer slightly and loosely built walls, with plenty of cavities within to act as air spaces. Our builder should know whether that astonishing theory is warranted or not, and also whether a more deliberately planned air space is better or not so good as furring, and whether either device be necessary in a given case. He should even have some notions of double air spaces, for he may be called on to build in Minnesota or in Manitoba. Again, he should be aware how commonly the skilled French builders disregard such devices altogether, and trust to the repellant power of good stone

walls. The building of chimneys should be a special fad of his; for although it may be admitted that no man can guarantee his flue and his fireplace as affording together a chimney which will not smoke, yet there are conditions precedent, and one of those is that the flue in an outer wall should be protected on its weather side from stress of weather. Many are the chimneys that will not draw because the outer air keeps them too cold, and because the wind drives through the porous bricks of the outer wall. Such chimneys there are, even in solidly built houses, which seem to transmit rain and cold from without more readily than smoke and hot air upward from within.

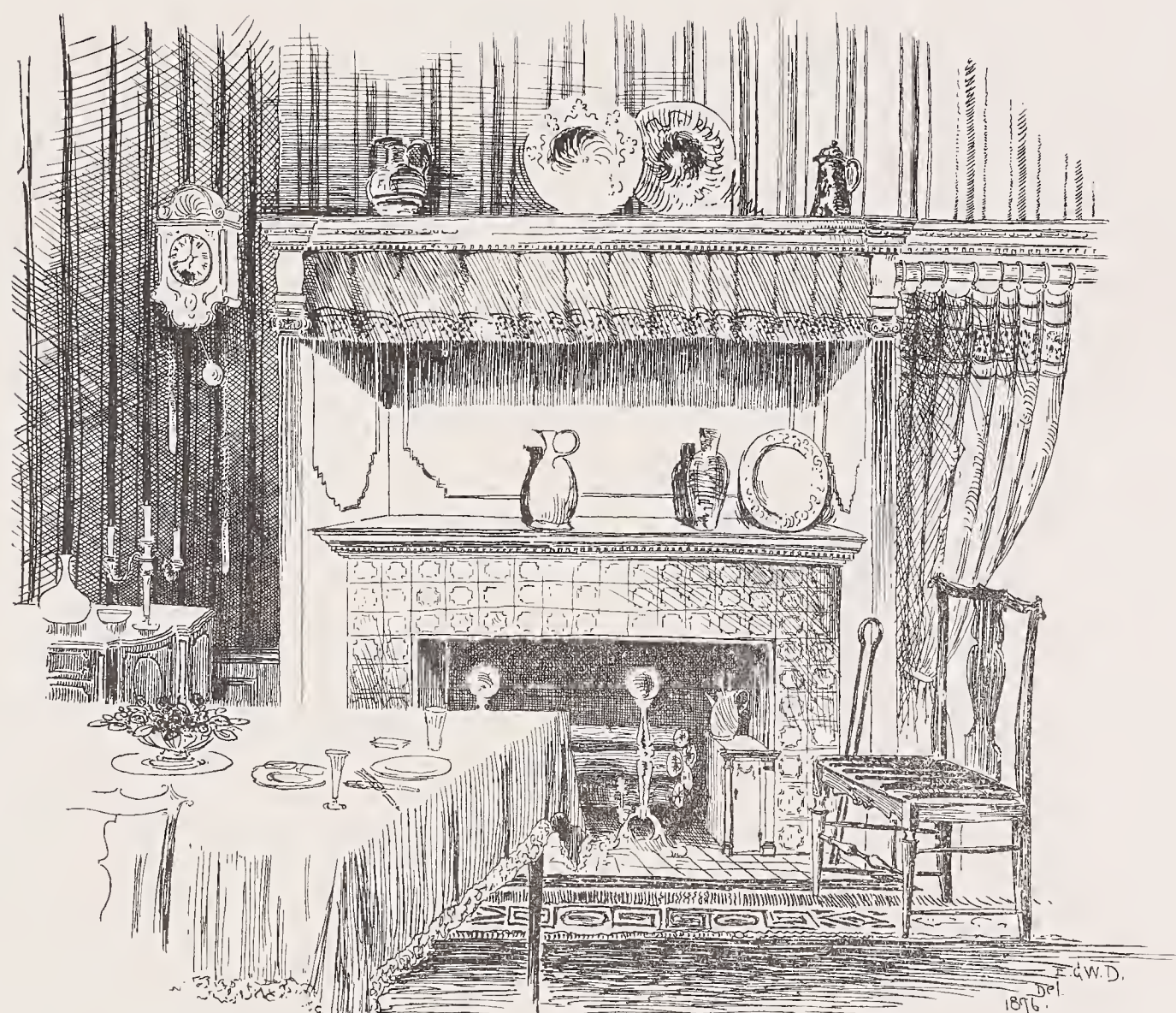
The professional architect, then, must know, in the intimate sense indicated in the above paragraphs, the whole art of building. He must also love building; he must love heavy stones, and good bricks, and stout, solid walls, and handsome timbers handsomely cut and framed. He must even love the new material, wrought and rolled iron and steel, for its great and as yet only partly known capabilities. When one is asked by a would-be student of architecture about the chances of succeeding as an architect, it is expedient to find out what his proclivities are, and whether he is merely interested in fine art, and seized with the idea that architecture is an easy fine art to study and to practice. Advice to the effect that really he ought not to become an architect unless he truly loves building and the materials of building is apt to be in place, and instances could be given where such advice has been well applied and well taken. One of the very best and worthiest of our mural painters had that advice given him twenty-five years ago, when he proposed himself as a student of architecture. He was told plainly that it seemed to his adviser that he was rather a lover of drawing and a dreamer of fine-art dreams than a possible builder. The young man took the advice that was given him, and the noble results of his career prove the soundness of the counsel.

The architect should love the quarries, and should visit them with eager curiosity. The cleavage of stone and its appearance in its natural bed should be not only a delight to him, but an object of close study. He should love the lumber yard, not to say the forest. To him, the timber in itself should be a thing delightful to study, and its possible uses delightful to contemplate. He should love the brickyard, and experiments in cements and in mortars should be his holiday amusement. Finally, the architect must have such an eye and such a soundness of judgment that bad work cannot escape him. A familiarity with details not unlike that of a good master-builder he must combine with a knowledge of principles and of possibilities far beyond that of the master-builder, so that good work will come to his buildings as of inevitable sequence, and bad or even slighted work will be impossible in them.

The matter of modern scientific construction in iron and steel can only be touched upon here, and there is really but one thing that need be said about it. Such construction is the affair of the engineer. Let it be admitted that the architect should understand its general principles. These are not so remote or so mysterious as they may seem to the beginner. When it comes to the actual building, to be run up in ten months, the metal uprights and ties composing the structure and the exterior of masonry being a mere concealing and protecting shell, that metal structure is the work of the engineer, and must be. It is, indeed, probable that in this case the engineer should be the first man employed, and that the architect should act as his subordinate; for the plans of the stories are rarely complex or difficult, and all the uses of the building are simple and obvious, while what need special ability are the calculations of the engineer. It is useless for the scheme of education laid out for any pupil in architecture to include steel construction in its higher development. It is inevitable, in our modern complex physical civilization, that the trades and the professions should be separated more and more, and that a man should be satisfied with expert knowledge in a single line of daily vocation.

What, then, becomes of our student of architecture? Is he to be expert in one thing only? He is to be expert in all the branches of ordinary building, ready, dextrous, handy and full of resources; and he is to know so much of the general principles of building, and also of the putting together of metal and the conditions of stability of the metal structure, that he can foresee the need of engineering skill in a given case, and can forestall the probable decisions of the engineer. What should be taught to the young man meaning to be an architect is, primarily, the how and why of simple, everyday building, such as has been practiced for centuries, is adapted to all those materials which his own country furnishes, and is according to all those processes which his countrymen recognize. Thus, if he should wish to study Byzantine vaulting without centers, or Gothic vaulting with ribs, or vaulting in cut granite, such as is used in our seacoast fortifications, it would be, in a sense, an additional and most interesting study for him; but his instructors should see to it that first of all he thoroughly learns the building of common life. After ten years of practice he may well enjoy the attempt to introduce into his work some of those beautiful, simple, inexpensive methods of building which the past offers for his consideration, while the present ignores them; but he will not begin with this. Building of an everyday sort—that is what he needs to know; but he needs to know it thoroughly well, to know it as a child feels the conditions of stability of his house built with wooden blocks. And he must grow to be ambitious to excel in the perfectness of his work. The writer remembers the shock which he felt when, as a student of architecture, he heard one architect in large practice say of the newly fallen wall of the unfinished church of a

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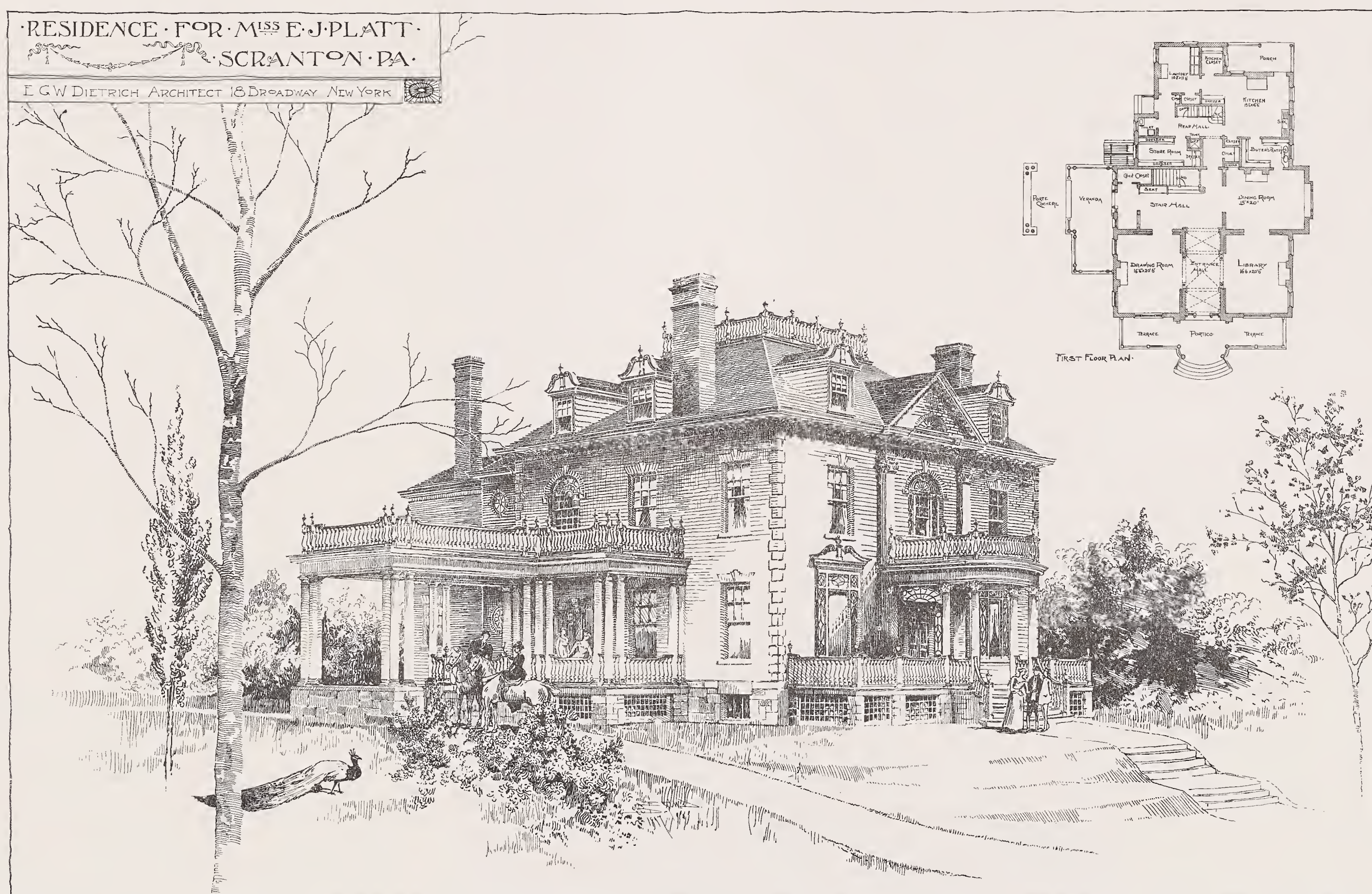
E. G. W. Dietrich
Architect.
18 Broadway, N. Y. City.

Dining Room Mantel in House
at Scranton, Pa.



E. G. W. Dietrich
Architect, N. Y. City.

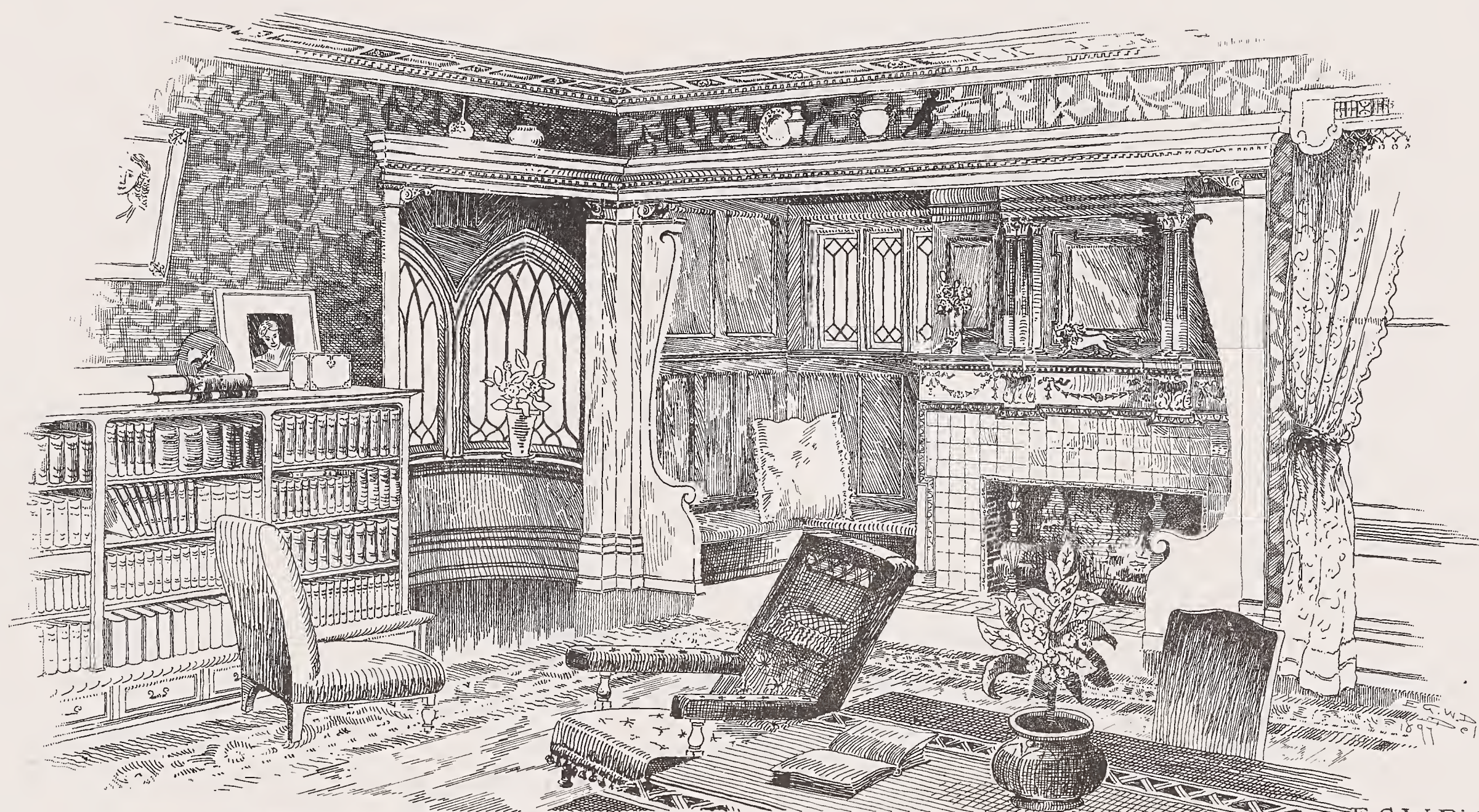
Hall in House at
Scranton, Pa. for Miss E. J. Platt.



RESIDENCE FOR MISS E. J. PLATT
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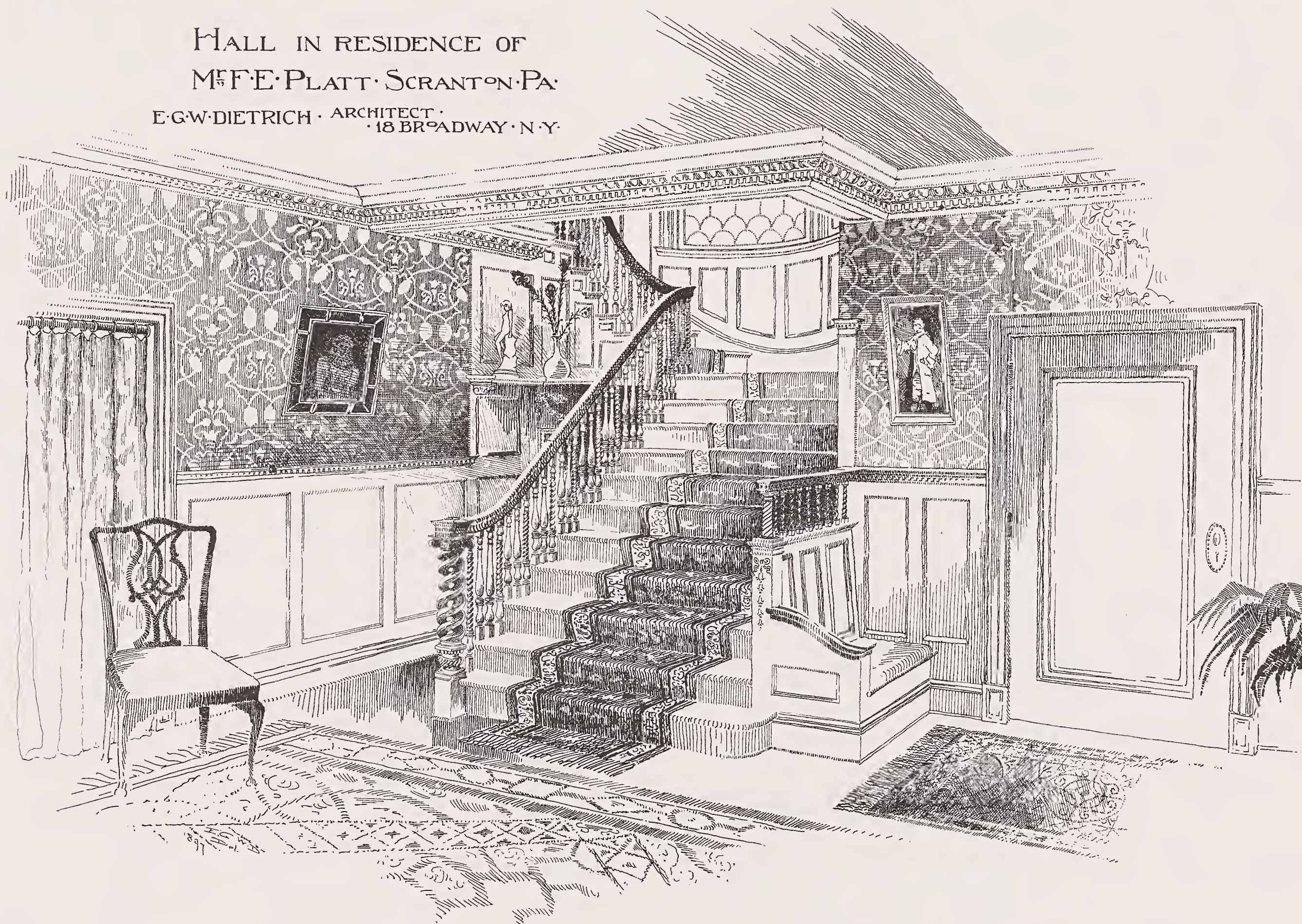
E. G. W. Dietrich Architect 18 Broadway New York

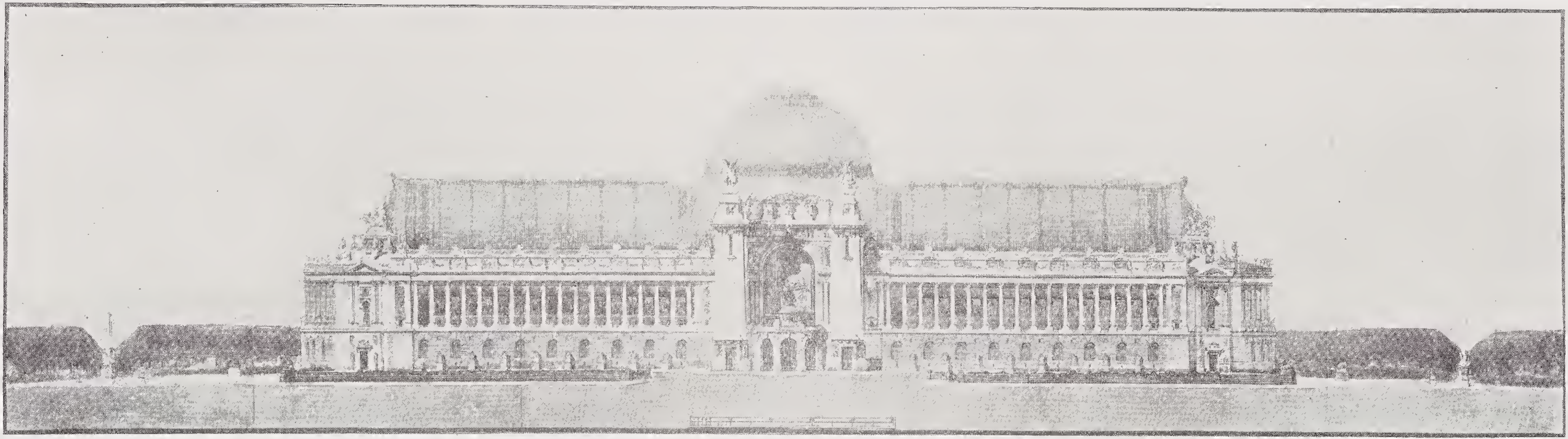
FIRST FLOOR PLAN



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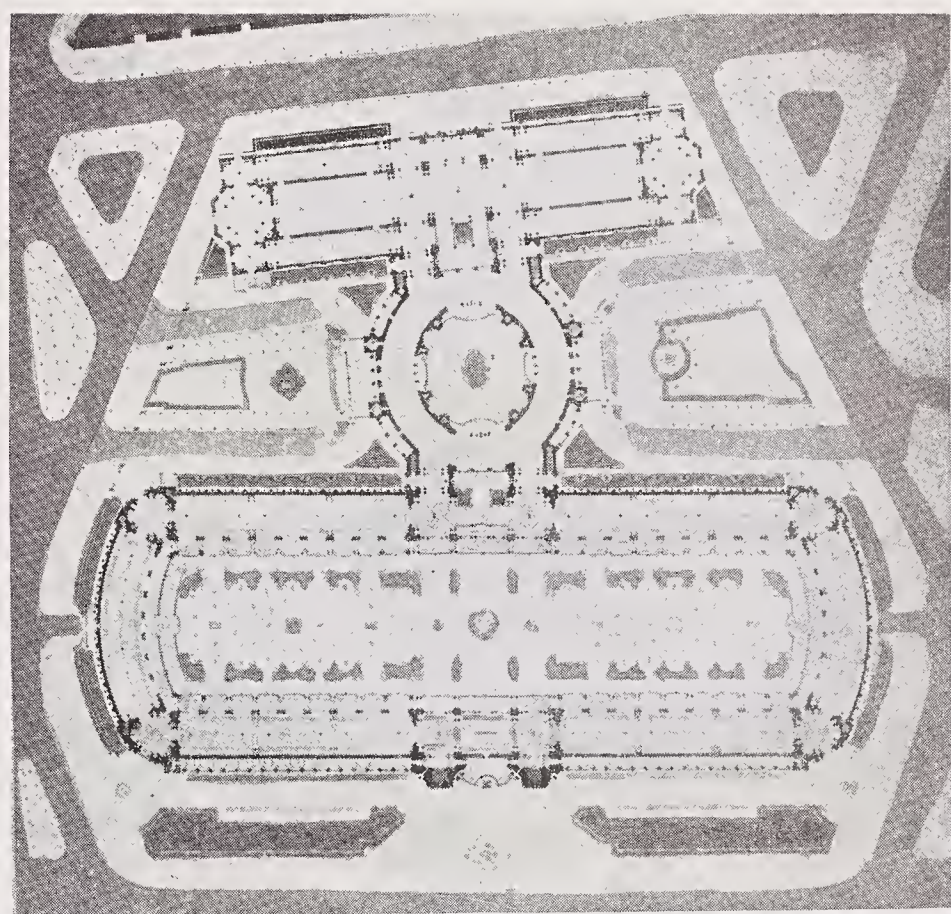




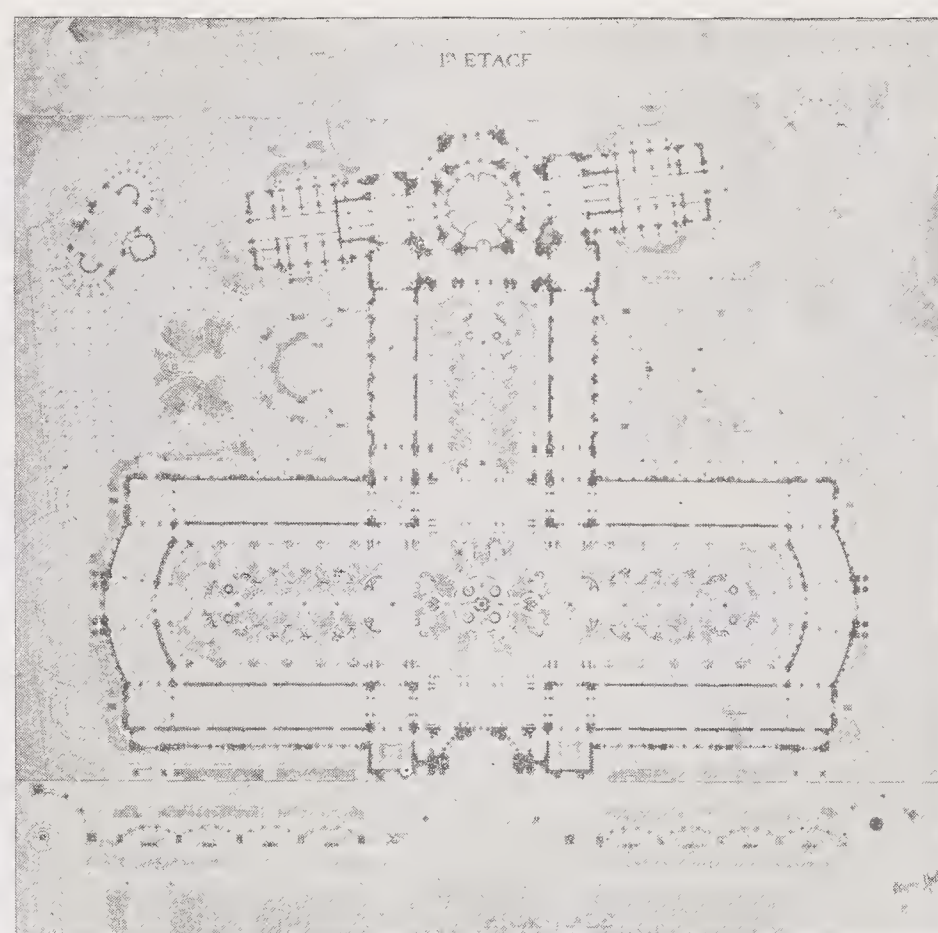
THIRD PRIZE DESIGN, M. THOMAS, ARCHITECT.



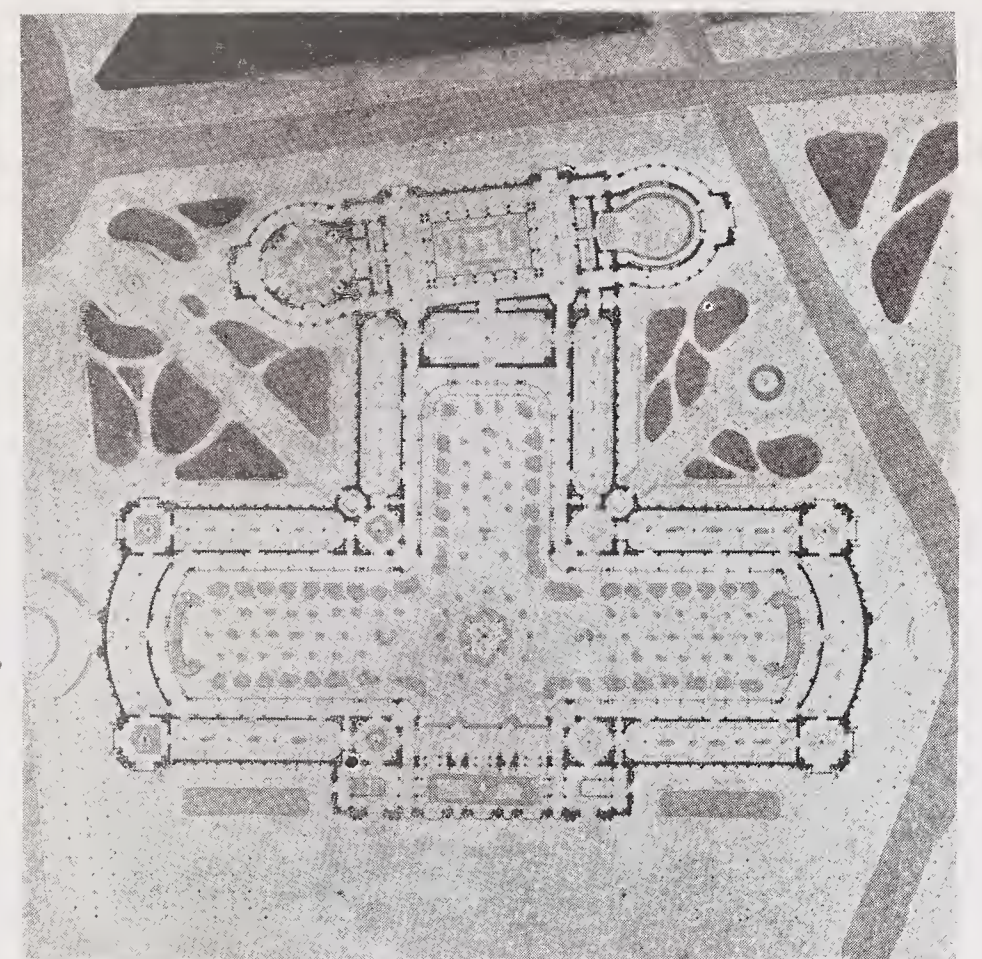
SECOND PRIZE DESIGN, DEGLANE & BINET, ARCHITECTS.



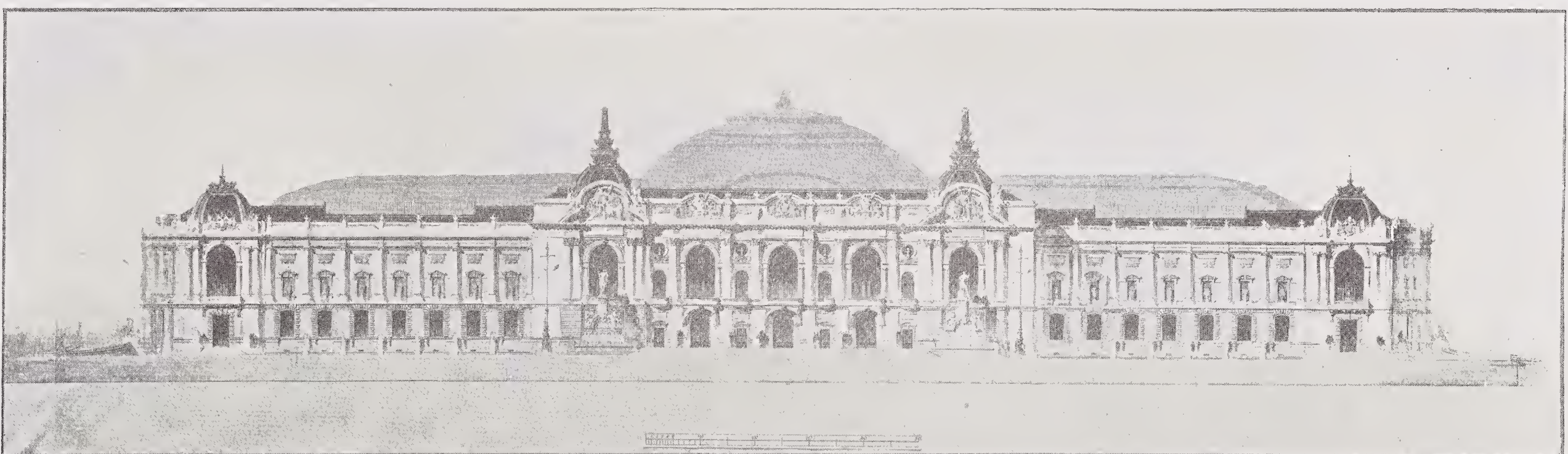
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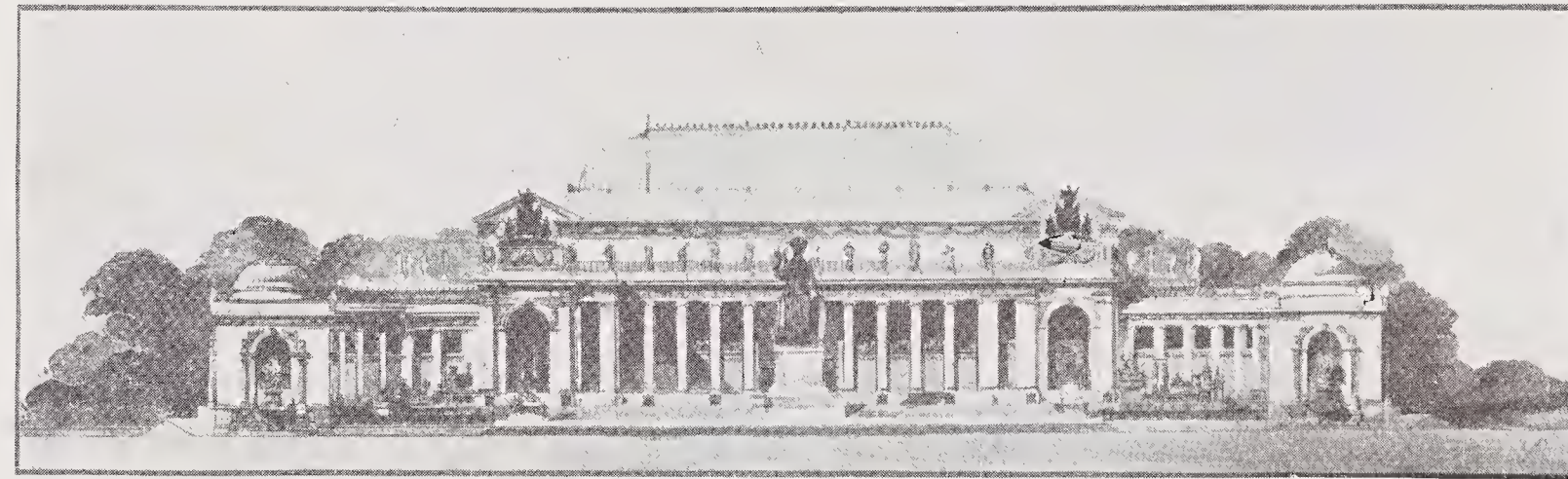


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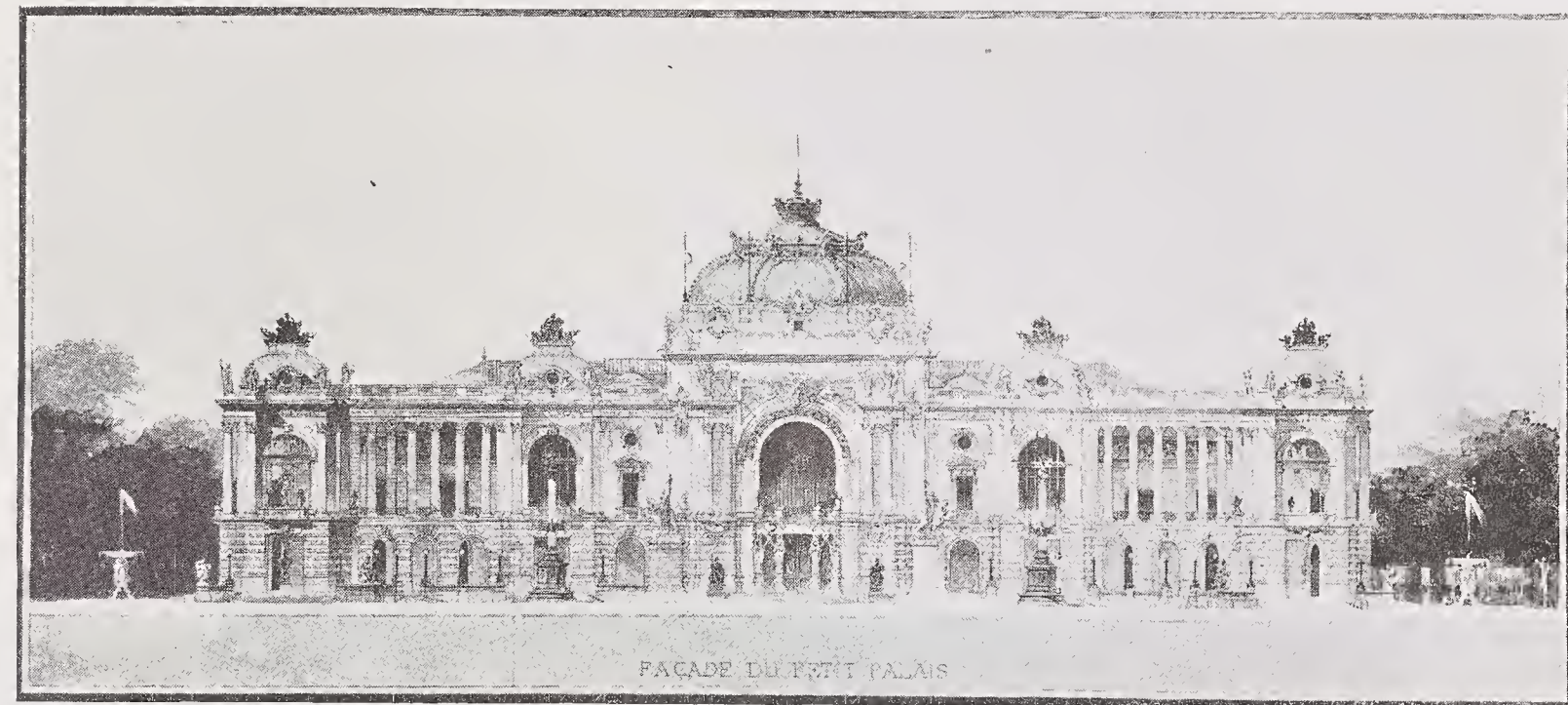


FIRST PRIZE DESIGN, A. LOUVET, ARCHITECT.

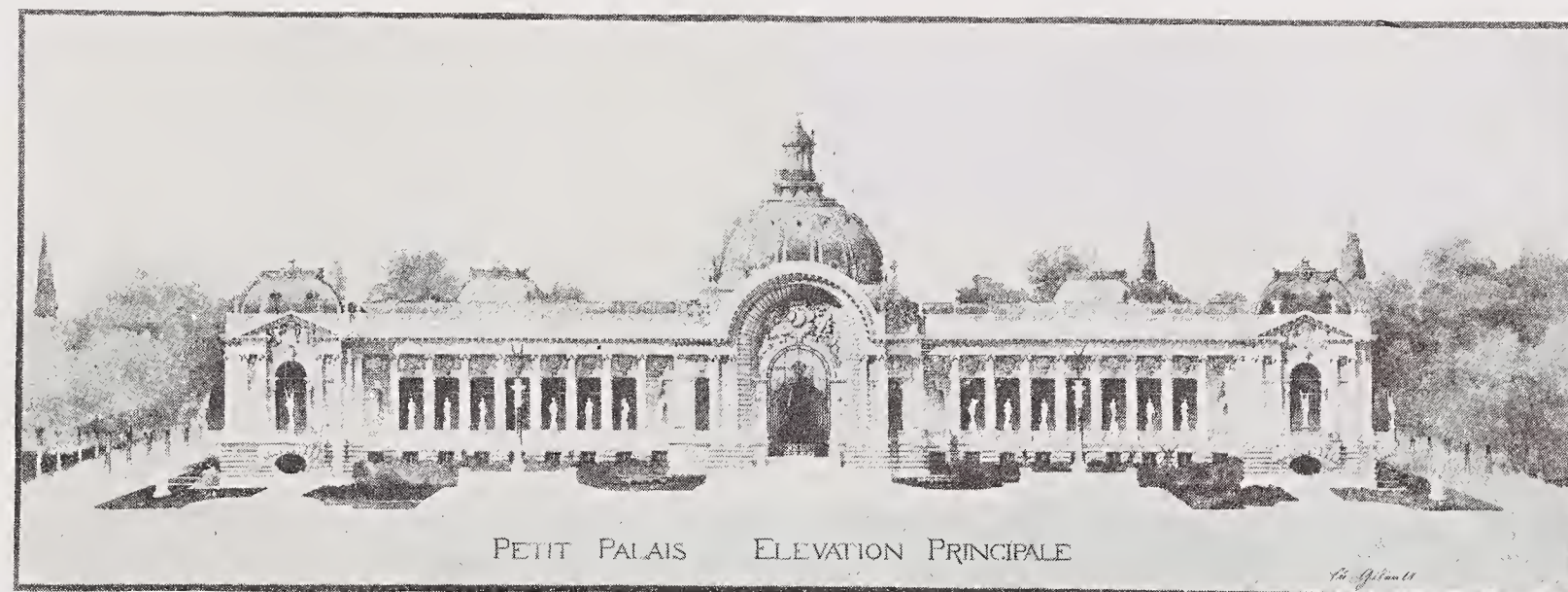
COMPETITION FOR GRAND PALACE FOR PARIS EXPOSITION OF 1900.



THIRD PRIZE DESIGN, TOUDOIRE & PRADELLE, ARCHITECTS.

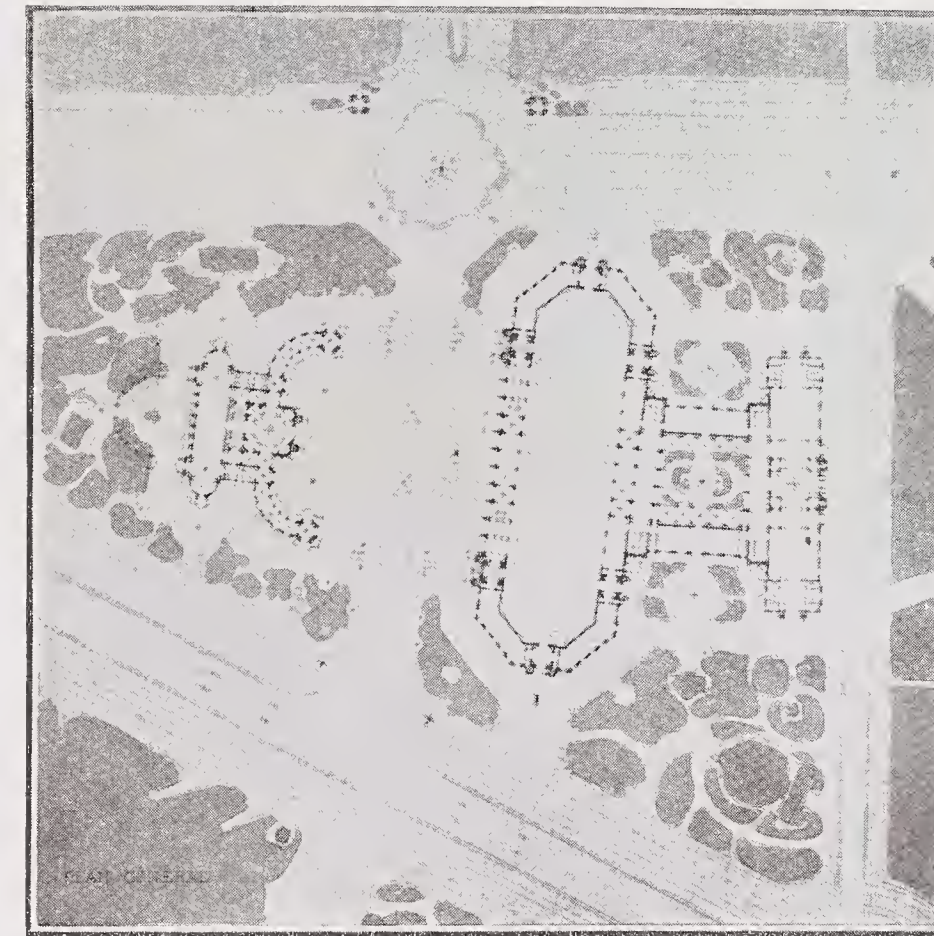


SECOND PRIZE DESIGN, CASSIEN, BERNARD & COUSIN, ARCHITECTS.



FIRST PRIZE DESIGN, C. GIRAULT, ARCHITECT.

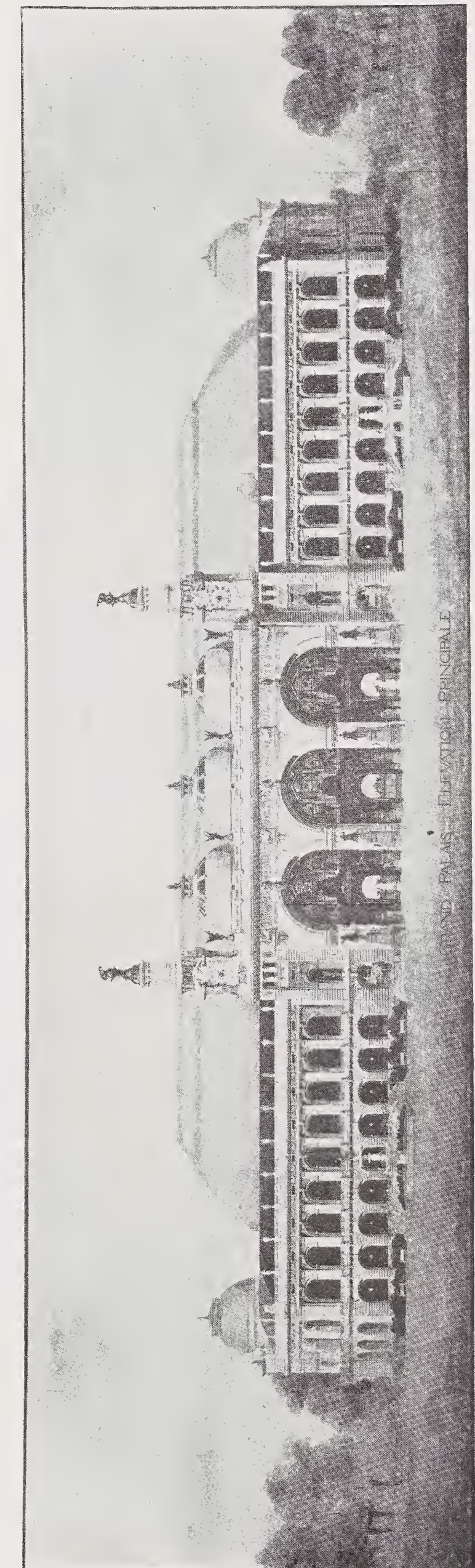
COMPETITION FOR SMALL PALACE FOR PARIS EXPOSITION OF 1900.



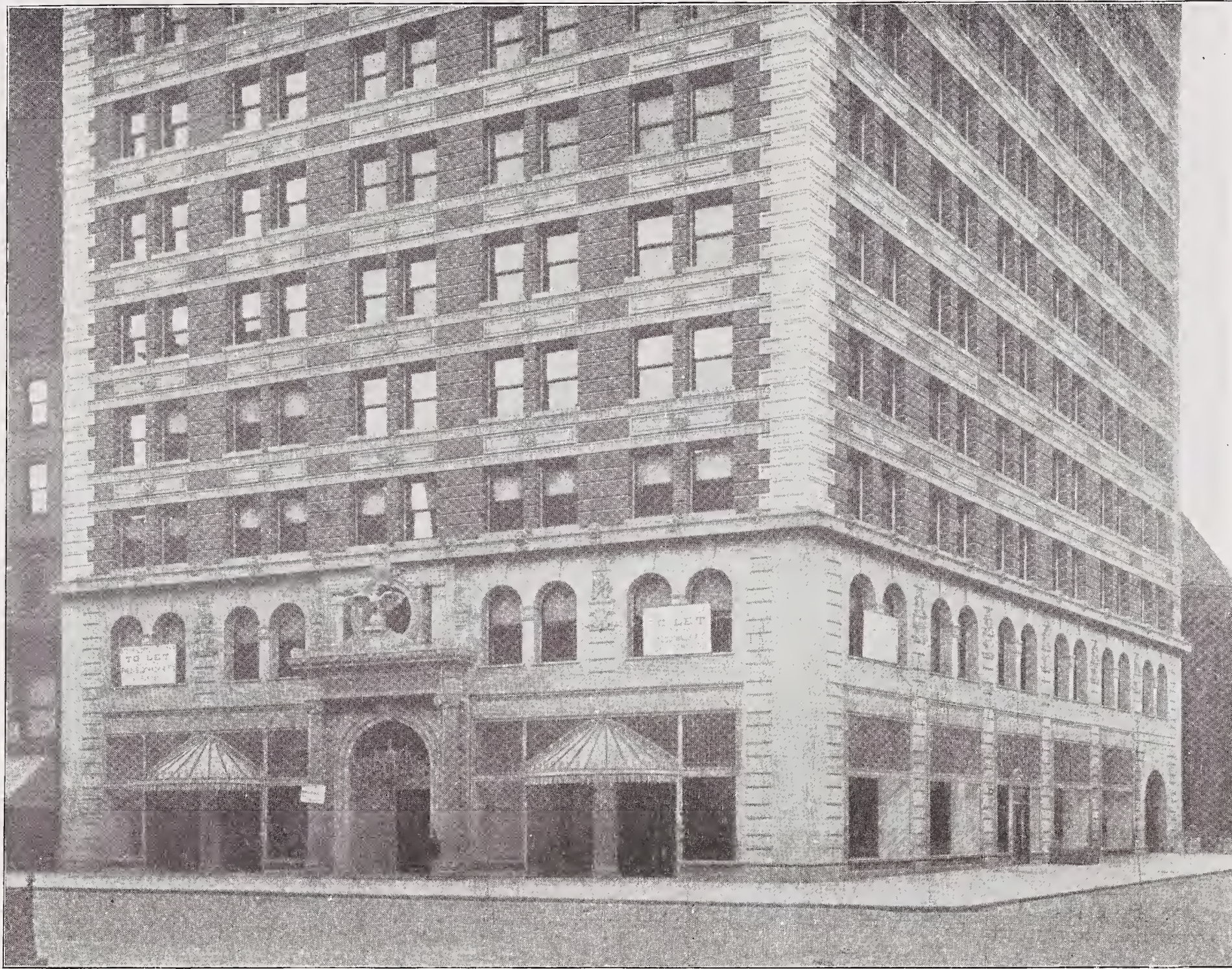
SECOND PRIZE PLAN OF SMALL PALACE.



PLAN OF FIRST PRIZE OF SMALL PALACE AND
FOURTH PRIZE OF GRAND PALACE.



FOURTH PRIZE DESIGN FOR GRAND PALACE, PARIS EXPOSITION OF 1900.
C. GIRAULT, ARCHITECT.



LOWER STORIES OF ST. JAMES BUILDING, NEW YORK CITY.

BRUCE PRICE, ARCHITECT.



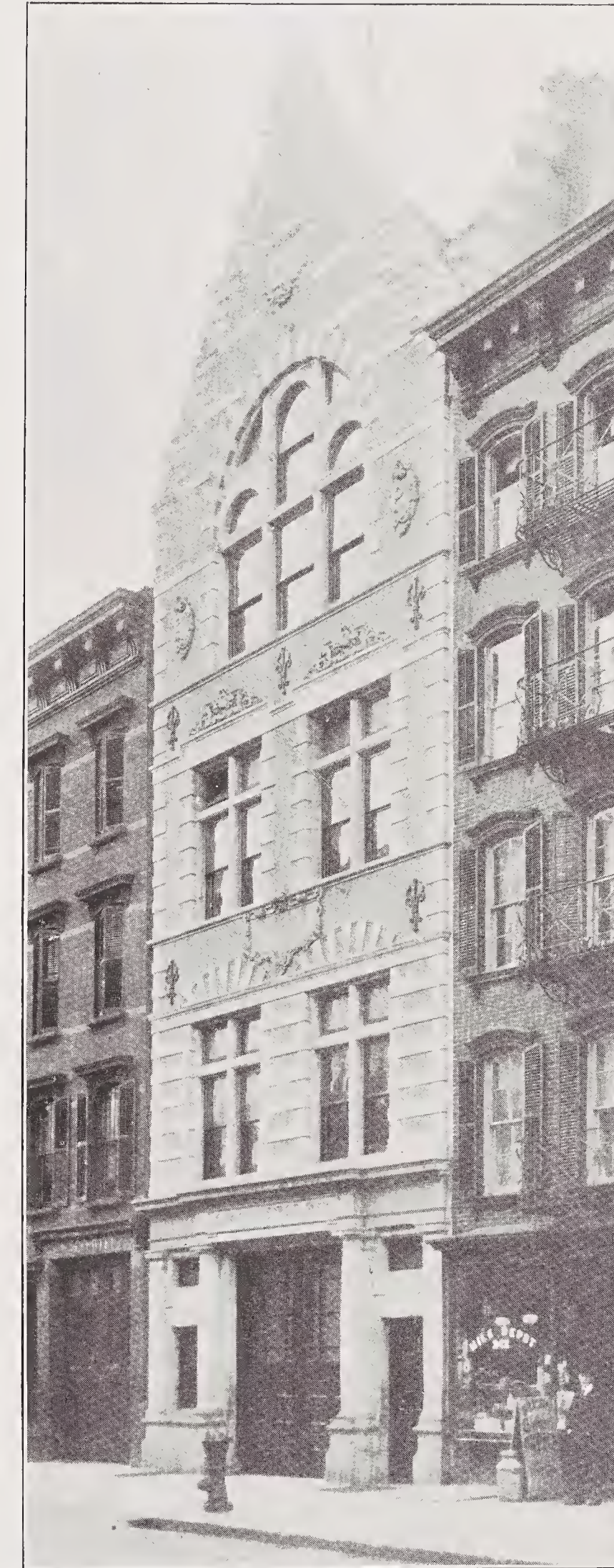
ART CLUB BUILDING, PHILADELPHIA.

FRANK MILES DAY & BROTHER, ARCHITECTS.



BUILDING FOR CITY TRUST, SAFE DEPOSIT AND SURETY CO., PHILADELPHIA.

WILSON EYRE, JR., ARCHITECT.



FIRE PATROL BUILDING, NEW YORK CITY.



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N. LE BRUN & SONS, ARCHITECTS.

brother architect that no one could find any fault, because the accident was due to frosty weather. Was that the standard which one architect set up for another? Was it really held by prominent architects that a wall might fall down, and the blame of it be laid on cold weather? His wonder has not diminished since that time, nor does it seem easy to understand how anything can excuse the falling of a wall, unless it be an earthquake or a bombshell. A mason of repute would never have forgiven himself, or have been forgiven, for such a collapse. The builders in our cities are not too conscientious, nor are the builders in our small towns too skillful or troubled with too high a standard of excellence; but the architect, as we find him, may generally lean upon the builder, as we find him, with great advantage, and get sound and good example from the practice of the builder when left to himself.

Second, the architect must learn to draw. He must learn to draw as a painter learns; that is to say, he must be ready, prompt, and dexterous in drawing everything that can be drawn, from the human figure down to a chimney-top or a square house with square windows. It may not be required of him that he shall draw altogether as well as a painter. It may well be that whereas the painter goes on year by year growing still more familiar with the human figure, nude and in every attitude which comes natural to man, woman or child, and with drapery as cast upon the figure in every such changing attitude, the architect will stop at a general knowledge, difficult to define or to express in words, but still very real and tangible. Take the well-known drawings of Viollet-le-Duc, for instance; that is to say, his drawings of the figure, as in the article "Sculpture" in the great "Dictionary of Architecture," or in the article "Armure or Cotte" in the "Dictionnaire du Mobilier." These drawings are not better than every architect should be able to make. Viollet-le-Duc was a man of exceptional genius as a draftsman in that he could make drawings by the thousand of architectural details and of architectural compositions, all of them extraordinarily clear in the way of explanation—the inessential parts omitted or hinted at, the essential parts insisted on—all with an almost infallible judgment, and a judgment so rapid that time was not lost in hesitation. He was exceptional, perhaps unique, in this; but in the mere excellence of any one drawing of the human figure or of sculptured detail he was no more happy than the architect should be; nor should the aspirant be satisfied with much less than Viollet-le-Duc's excellence in this respect.

Apart from excellence of final achievement, a certain dexterous readiness is also eminently desirable. Thus, the architect should have drawn, before he begins to design for himself, hundreds of buildings at home and abroad. One of the best living architectural draftsmen has said, as we may translate it, "It makes little difference what one draws. To draw a great deal, to be always drawing—that is the secret." "Dessiner énormément, avoir toujours le crayon à la main"—that was Alexandre Sandier's word to his American friends. The architect should have drawn from the best examples within his reach, but at all events he should have drawn, in great numbers, gables and dormers, towers and steeples, timber roofs seen from within and molded arches seen at various angles, groups of columns, coupled columns, entablatures and archivolt, and masses of building as seen from an adequate distance. These things he should have drawn free-hand, either with the camera lucida, which is unobjectionable in difficult cases, or without help of any kind, under all sorts of conditions and in all sorts of light; and from such drawing he should have gained such a knowledge of the appearance of the existing building, solid and enduring, with firm joints and upright angles, that the look of the structure should have become a part of his familiar knowledge. Then, when a new design is in progress, and he has to put into shape the exterior of a building which he has partly planned, he can do it by a drawing made from the vision before his mind's eye. His conception of the gable or spire, of a whole mass of building or of a group of buildings, can be embodied in lines which are very nearly accurate. It is remarkable how close to the actual truth even a very imperfect draftsman may come in this respect. Many a man whose knowledge of the human figure is far less than we have assumed has become so dexterous in drawing architectural forms that his perspective sketches of a building or of its parts would prove on trial to be scarcely inaccurate even in small details.

Now, this matter of designing in the solid, and skill in setting down the main lines of that design in approximate perspective, is the very life and essence of ready and easy design. It is the thing which our school-taught architects lack most sadly, and the thing which every student should put before him as most of all to be desired. Men who are taught mechanical drawing, and little else; who know artistic drawing only as a means of indicating the presence of a scroll ornament, or of putting in the curves of an arch in a mechanical perspective, are always making the mistake of designing in elevation. To do that is to invite failure. Nothing can be designed in elevation except a street front, as of a narrow city house; and even for this, no designer should be satisfied with an elevation drawing alone. Every separate arched window, even every separate square-headed window—or at least every separate pattern of window—requires to be drawn in perspective, that the relation between the reveal or visible thickness of wall and the width of the opening, the relation between the length of the lintel and its bearing on the wall, the relation between the moldings at the angles, if there are any, and the whole window, the relation between the ornament put upon the face of the lintel or the archivolt and the open space and the piers on both sides, may all be seen aright. An elevation drawing falsifies all these things, and its one function—namely, that of transmitting to the builder the architect's purpose—should not be confused with the

idea of its embodying the design; for it cannot do that. Elevations must be made as sections must be, and ground plans; but elevations, and also sections which have to show any part of the architectural composition, should be drawn with the constant sense of their being what they are—namely, the abstract embodiment, in a technical form and for a technical purpose, of the design previously completed in the solid.

The need of skill in artistic or free-hand drawing for all design in the way of decorative sculpture, and the application to a building of such sculpture, and for all design in the way of decorative painting, mural painting, and polychromatic adornment, is too obvious and well known to need restatement here. To be sure, if you are content, as many of our practicing architects today seem content, to design buildings without decorative sculpture or decorative painting, you need not worry about learning to draw ornament. Buildings are being erected, even at high cost, and by architects and firms who are leading men and leading firms, in the business sense of the word, which buildings affect no decorative or artistic success beyond that of a generally pleasant harmony of proportion in façades and in interiors of rigid plainness. If you agree with yourself to have no carving about the building except a few Corinthian capitals, and to take those capitals directly from the plates of a book, or to let the marblecutters work them according to their own notions, then, indeed, you are to get off cheaply, and to produce your architecture at but little cost of thought. In this, as in other ways, to quote a much-talked-of article in the *Architectural Record*, "classic is such a soft snap" that the designer of that kind of classic does not come within the scope of the present inquiry. Architecture, however, has always adorned itself with sculpture and with painting, and it always will. The rejection of such adornment is a surer sign of deadly decay than exaggeration or misapplication of such adornment. Nor is the architect who deliberately rejects the knowledge and the practice of sculpture and painting other than an inartistic modern of the most hopeless species.

We are brought inevitably to the third requirement of the architect, which is a knowledge of modeling. Drawing can do much, and in the hands of a facile draftsman the pencil or brush is capable of a language readily comprehensible to him and to others; but there is another language which makes it possible to say clearly some things which even drawing cannot express. Some benefactor of his kind should gather a collection of models made by great men of the past and used for their own study. There are not many such in existence, but there are a few, and any one of these which is finally fixed in a museum might be photographed, at all events, and perhaps cast, for our supposed collection in America. One clay model of a piece of furniture, as of a *bahut* of the sixteenth century, would teach our young workmen a great deal which they ought to know. They have, no doubt, a general idea that the modern sculptor works in clay, takes a cast in plaster of the finished clay model, turns that cast over to marblecutters or bronzefounders, and then supervises the final finishing of the piece; but are they aware that every silver powder-horn or carved gun-stock of a good time of art was modeled in clay or wax? Anyone can see the designers for a firm of silversmiths or dealers in furniture making delicate and refined drawings, but the precious material, modeling wax, hardly has a place in the modern designer's rooms; and yet there is no greater encouragement to the spirit which would reach out toward novel modifications of the ancient types—toward the redesigning of the old design, as Mr. La Farge has put it in his latest book—than freedom in the use of modeling clay and wax. Let us assume that no one is so rash as to try to create a new design, or to design without reference to art which he knows of old. Even then his porch or his bay window, when modeled in the solid, has a chance to put on a very different air, and to be original in a truer sense, if he is using the solid instead of merely the flat for its shaping as a feature of a new structure.

Modeling for architecture is of two sorts, one and the same in tendency and character, but still capable of separation the one from the other. An admirable paper by Mr. Henry Rutgers Marshall, in a recent number of the *Architectural Review*, has pointed out the value to architects of the model used for the whole of the proposed building. Mr. Marshall uses a model instead of preliminary studies, except of the floor plans; instead of perspective drawings or elevations, he submits to his employer photographs of the model, and the model itself is accessible at his own office. Photographs may be taken in indefinite numbers and from any point of view which the model itself shows to be a good one; nor is it hard to take bird's-eye views, as from a neighboring hill, or views from below, as from a neighboring valley, with the house relieved against the sky. Moreover, the paper in question calls attention in a most masterly way to the value to the designer of seeing his design taking shape in solid form. That paper, although addressed to the professional reader, should be read by everyone interested in the possibilities of modern architecture, and it may be accepted by those who read it as containing the soundest of sound doctrine. Such models as it describes, however, are too small in scale to allow of proper proportionate treatment of sculptured detail; and a farther step must be taken, as will be suggested below.

This matter of sculptured detail is the other half of the subject of modeling in connection with architecture. It will be readily admitted that when a capital is required which shall not be a mere and even a slavish copy of an old one, it should be modeled to full size. It may even be admitted that a bas-relief runs a better chance of being effective as decoration if it has been modeled

instead of being cut directly from a drawing. The carver will probably model it from the drawing; but why should that strange influence interpose itself? Suppose, now, the case of a porch, in which three or four columns are to be clustered together in one group or arranged in couples. It will not require a very strong effort of the imagination to see the great advantage of modeling the whole corner on a rather large but still a reduced scale. Possibly two of the capitals may need to be cut out of one and the same block; but even if each capital is to be shaped from a separate stone, the close juxtaposition of two, and still more of four capitals, requires in each a treatment which will be found to differ from the treatment of a capital which is four feet away from its nearest neighbor. If, as in many noble styles of architecture, the capitals are to differ in design, it becomes highly necessary to see their models side by side; and this, perhaps, in full size. So with cornices, lintel courses, entablatures; their relations to the walls, the pilasters, or the columns which support them are really not easy to determine, except by the careful modeling of a large piece of the wall and its crowning member. This applies equally to classic and to mediæval fashions of work, not to mention the outlying styles, in which experiment is always the order of the day. Even the most severe piece of classic work should be modeled, in order that the designer may be sure that he is getting his own design into shape. Redesigning the old design is the right thing, of course, but it needs to be redesigned! An architect has no right to say to us that so and so is good because it is exactly copied from the Theater of Marcellus; what we ask of him is that it should be good because it is carefully restudied. The building which our architect has in hand is not at all like the Theater of Marcellus; it is not a great semicircle of open arches divided by piers which are adorned with engaged columns. What the modern man is designing is pretty sure to have the arches filled with sashes and with doors; nor is there one chance in a hundred that he is building so massively. For him, then, to copy the ancient theater accurately in all its details is to do a preposterous thing. It is for him, if he recognizes the value of the Græco-Roman design, to redesign it for his own purposes, and to consider very carefully the question whether he has not followed the original too closely—whether his thinner wall, his smaller dimensions, his flat façade, and his glass-filled archways do not require a still wider divergence from the actual proportions of the original.

There can be no doubt that the young architect should be taught these three things—to build, to draw, to model. His knowledge of building may be theoretical, though he will know more about it if he has had a little experience in laying bricks himself, but his knowledge of drawing and of modeling must be of the most practical nature. The models of buildings which Mr. Marshall deals with may, indeed, be made for the architect by those whose business it is, but he will find it for his interest to put his hand to the wax, now and then; nor is it presumable that he will get very good modeling done unless he knows how to do it himself. There are exceptions to the truth of every statement, and it is true that one of our most original designers of sculptured ornament declares his inability to model, and avows that every part of his elaborate work is done for him by a sculptor who is in sympathy with him and whom he can fully trust. Exactly in the same way, one of the small number of our architects who really make their own designs, instead of taking them ready-made from books and photographs, hardly ever touches pencil to paper. These may be considered exceptions. It may be said that they are instances of the general truth that architectural work is the work of many associated minds, and that nothing is misdone which is done rightly, whether by several minds working together in harmony, or by a single spirit. No one is to imagine that a great and complex work of decorative art is designed in one piece by one man, and put under contract with one firm. It is a heresy of our day to suppose that to be possible. The loggetta at the foot of the Tower of St. Mark, with its elaborate sculptures, is assigned to Sansovino, and yet one might safely wager something handsome, if Sansovino could come back to decide the bet, that other minds than his own strove with the problem even of that very small and very simple structure, and that other fingers than his own worked in the clay. The familiar instance of the Gothic portal, with its statues and reliefs, may be cited again, because it is so familiar, and it has so long been a recognized truth that much harmonious coworking was necessary, when that conception was put into solid form. In such a case as that many designers may work together, always provided that there is some one to decide peremptorily when there is division or disagreement. It would be quite safe to assume that all those coworkers were practiced artists in the arts of their day.

Is there anything else needed by the young architect? Other things may be needed by the architectural draftsman who looks for a good salary; but that is quite another matter. This is not the only occupation in which the training of the subordinate is not exactly that best fitted for a principal. If a man sees that he must earn his living for some years by making mechanical drawings in an architect's office, he must, indeed, learn some things which are not set down above. The very simple principles of mechanical drawing, as used by architects, may be learned by practice in a few weeks; but the draftsman who expects high pay must be skilled in various tricks of mechanical drawing, wholly unnecessary for the actual work of building. Rules for the "casting of shadows" and the mathematical system of perspective drawing are to be learned, and the shading up of drawings and the prettifying of them in monochrome and in color to please the

client must also become familiar—though these, of course, are of no practical use whatever. The mechanical drawing which the architect needs for ground plans, and even for elevations and sections, if he is fond of making his own drawings, as some first-rate men have been, or if he finds it necessary to do his own work, may be speedily acquired. Accuracy of setting out and of figuring (a most vital and most peremptory necessity, under our present system) is a matter of temperament and of thorough knowledge rather than of technical skill as a draftsman.

Sound and ready knowledge of building, dexterous readiness and some approach to excellence as a free-hand draftsman, and some skill as a modeler—these are the three things which the student should be taught. All else is a part of his higher education, of his training as a man rather than as an architect. Time was when there existed no such distinction; when there were living traditions which the young architect had to learn, which he would learn naturally as an apprentice—exactly as the apprentice painter picked up his art of painting naturally, and ground his master's colors and swept out his master's workshop the while. Those days are gone. There is no tradition now which ought to be learned, because there is none which is not that of some school or coterie, none which binds the world of building men. There is no tradition now which should not be avoided, because there is none which is not telling against a healthy growth of the fine art of building. Present traditions are of the most mischievous character, and nothing can come of a familiarity with them but a prolongation of the sterile years, the years of the lean kine, through which the European world goes starving in spirit for food of the solid and wholesome sort known to men of old. Designing cannot be taught; good taste cannot be taught; and yet it is well for the artist in any department to learn what other artists have done, and to learn how they designed and to see what they accounted good taste. The essential distinction is this: that while the young painter and the young sculptor of our time can afford to watch their immediate predecessors—the men twenty years older than they—and learn something of their ways of work, while they learn also the greatness of the bygone ages of art, the young architect would do well not to learn what his contemporaries and those a little older than he have been doing. That which has been done since 1815 in the way of architectural fine art has not been worth the doing, and it would be better, on the whole, if it were all wiped out. Some interesting buildings would be lost, but it would be better for the immediate future of art if the buildings erected since that time had been brick factories in appearance with square holes for windows. There are evil influences working on all the modern world of fine art; and yet painting and sculpture are living arts, and some even of the subsidiary arts maintain a feverish existence; but the great fine art of architecture is not alive; its nominal practitioners have become administering, adjusting, dexterous fiduciary agents, with only here and there one among them who cherishes even the spirit of the artist. The student of architecture has nothing to learn from the epoch in which he finds himself. How he is to study the art of other epochs, and what opportunity there is for him to learn, by precept or by example, something of the fine art of architecture, is a subject which we cannot here consider.

ELECTRICITY IN THE PROVINCE OF THE ARCHITECT.*

BY ALBERT W. HAYWARD, F. A. I. A.

IN order to keep up with the times in matters electrical, one is obliged to revise his information almost daily, somewhat as with stock quotations. Our idea, therefore, in having the electricians meet with us this evening—aside from its social feature—is that we may thus be enabled to bring our information up to date. With the architect, electricity necessarily has a more limited meaning—a narrower sense—than with the scientific or practical electrician; we deal principally with effects, with results—he, with causes and hidden reasons as well; but it is of great advantage to the architect to understand many of those mysterious causes that produce—or sometimes fail to produce—the results we desire, and it is only from the electrical specialist we can gain this knowledge.

The science of electricity has surrounded itself—in fact, almost buried itself, so far as the laity is concerned—with terms that carry with them no hint or indication of their meaning. They are, in some cases, the names of individuals long celebrated in the science, but more generally are of those who, having discovered some new principle or phenomenon, have forthwith become its godfather. It is all right, of course, to honor scientists and to immortalize oneself, but it certainly would have simplified electrical matters very much if this method of nomenclature had not become quite so universal. We, of the uninitiated, might perhaps today know considerably more about this complex science if its nomenclature were not even more mysterious than its nature.

Exactly what electricity is, I believe no one can satisfactorily explain, though approximate definitions are not wanting. We know this much about it, however, that there is no force which we can now so accurately measure or so certainly calculate, or that is more tractable in the hands of a master. We recognize it to be endless in quantity and limitless in power; it is, as we use it, merely a form of energy due to the natural effort to return to a static condition—to a perfect equilibrium—on the part of an

*Paper read before the Cincinnati Chapter of the American Institute of Architects, January 25, 1898.

unseen, all-surrounding, almost all-pervading "something" that has been disturbed or thrown out of balance. We throw it out of balance usually by means of the dynamo, which acts on this mysterious agency somewhat as a force or lift pump does on water. I believe one form of energy can only be produced by the expenditure of another, and it is the energy expended on electricity that makes it capable, in turn, of exerting force. No one can exactly define electricity—but then this is also true of the force of gravity, magnetism and other forces. One celebrated authority has said that "electricity is magnetism to which motion has been added," so we will let it go at that.

We now know, sufficiently well for practical purposes, what electricity is, from what it does and from what we can do with it; and as it is not matter and is perfectly invisible and intangible in itself, we are hardly likely to become more intimately acquainted with its true inwardness than we are at present. Some subtle scientist, to be sure, may some day unlock this mystery, and then man, it would seem, would have the knowledge and wisdom of the gods. There would be no mysteries beyond—life, herebefore and hereafter, would be an open book. We live in a sea of electricity; it is believed the world and all the heavenly bodies are submerged therein, that it fills all space, and that it is the predominating agency and influence of the universe.

There are some substances, however, that are more susceptible than others to the electrical force, commonly called "current"; those through which it passes or acts the quickest or most readily, we call good conductors, and those which resist its passage we call nonconductors, and it is, thanks to and by utilizing these two classes of substances that we are enabled to accomplish what we now do with this both so well and so little understood power.

The great aim now is to generate this power cheaply. Untold millions of inanimate horse-power or units of energy in water and wind power—force of gravity and the sun's rays—that might be utilized for giving energy to electricity are daily and continually going to waste, and could but a small portion of this waste be stopped the problem would be solved. Fuel, such as coal, natural gas, oil and wood, is energy received through the middleman—through the broker, as it were—but no doubt we will yet learn to secure the needed energy direct from the producer, and so save one commission, and reduce cost accordingly.

To the architect, thanks to the electrician, electricity is daily becoming more important, more indispensable. A few years ago we confined our dealings with electricity to a few call bells; then gas lighting was placed within our reach; next came electric lighting, motors and telephones; and now we are offered electric power for the purposes of heating and cooking, so that today about all we need to do is to erect suitable inclosures or buildings in which electricity may make itself useful, in which you only need to press the button while electricity "does the rest." But between the realization of all the benefits conferred upon mankind by its ready servant, electricity, and the natural latent energy, there is a vast field to be traversed—not always a field, either, as there are mountains to be climbed, precipices to be scaled, and altogether much arduous labor of mind and body required. The day is not far distant when electricity will supplant all other power needed in our buildings, and it will, no doubt, be conveyed at so low a pressure or otherwise in so safe a manner that danger from fire and loss in transit will be even less than is now the case with the gas piping. Perhaps, in a few years we will erect, in connection with our dwelling houses, sun energy absorbers or "vibrators," which will, by means of dynamos or simpler device, gather up the surrounding electricity and convert it into a form of power which may be generally utilized in the domestic economy, and so perhaps electricity will solve that perplexing problem of household servants, at which everything else, human and divine, has thus far signally failed.

As a power for driving elevators, electricity now has no equal, the placing of the motor directly on the axle of the cable drum having effectually solved a great problem; and let us hope that this august power, that acts with the speed of thought, may also be utilized to hold the cab in its strong grasp on the failure of the cables or in case of other accident—safety in an elevator being the first consideration.

While electric power is now offered for heating purposes, it is hardly as yet in a practical condition, but great improvements in this line are looked for daily. Even now the steam and water heater, the furnace and the range, tremble for their future existence, as they recognize the fact that there is a Richmond in the field.

The dynamo and motor are practically the same in construction, they being interchangeable as energy-producers or energy-expenders. They are comparatively a new device—a new idea—and it need not astonish anyone should an altogether new method of producing or utilizing electrical power be hit upon any day—either accidentally or designedly—by some bright or inquiring mind. Within a year, so rapid are the developments in electrical matters, the present means of giving force to electricity and of utilizing this force may be antiquated. That really the very best method has, so comparatively early in the investigation, been discovered is hardly probable, though of course possible. More attention is probably now being given by our inventive faculties toward discoveries and developments in the electrical field than in any other, as it is both an intensely interesting research and ever promises the riches of a Klondike. We believe we are as yet only on the threshold, and that undreamt of possibilities and untold wealth lies beyond.

The architect often has to use volts, amperes, watts, farads and other meaningless terms in drawing up electrical specifications, and it is therefore necessary, or at least convenient, for us to reduce these, if possible, to common sense. A volt is simply the unit of electro-motive force or tension. Electricity is not a fluid or a gas, and so can have no actual current as does water and gas. The electric "current" is due only to a disturbance of equilibrium—a difference of potential—but there are some analogous points between water or gas and electricity. The power, which is due to the pressure of water or gas, and which consequently makes it more and forms a current, is somewhat similar to that energy the unit of which, electrically speaking, is called a volt. Unscientifically speaking, therefore, a volt is the *pressure* on a current of electricity; and carrying some of the other names thus through unscientifically, an ampere means the *volume* of electricity, the ohm the *resistance* encountered as a given *volume* travels through the wire, or other conductor, under a given *pressure*; the coulomb is the *quantity* of electricity, the watt the *power*, the farad the *capacity* and the joule the *work* or *energy*, and thus we have the science stripped of some of its seemingly unnecessary mysticism and brought within the reach of our everyday understanding. While these definitions are not exactly true, they give us something to start on—something to get hold of—and probably will answer an architect's ordinary needs.

We know a little about electricity from our superficial dealings with it, but there are still many little points we can learn from the practical electrician. There are tricks, to be sure, in all trades, and we will probably not learn all of yours any more than we have so far succeeded with the painters, but we are anxious to learn all we can, and there is no doubt much you are willing to tell us. The conscientious electrician can help both himself and us by elevating the general character or standard of electrical work, and he can do this in no surer way than by assisting the architects to grasp the newest and best ideas by showing them what good work requires—what it really is, and how to secure it. That there is much fraud in electrical work, especially in concealed wiring, we all realize, and your efforts and ours should be concentrated toward making such frauds impossible. Electricity is one of the most complex branches coming within the province of the architect; that he cannot become an expert in all, if any, is apparent, so we must rely, after all, on the ability, honesty and cooperation of those who actually carry out the work intrusted to our care. We wish to know exactly how to properly specify electrical work and to understand it sufficiently to intelligently supervise it. We wish to be able to secure the best results for our clients, and this is certainly what the better class of electricians also desire.

Before closing, I wish to say a word on a somewhat kindred subject and one that concerns us all. It is a perfect shame, to say the least, that we have not commercial electricity in our suburbs. To think that here we have a city of over four hundred thousand inhabitants whose principal resident districts are absolutely without this great convenience, this index of progress and enterprise, this blessing of our age—a blessing enjoyed by the inhabitants of, I believe, every other city and even every enterprising town in this country. If those who should supply this want won't do so voluntarily, they should be compelled to, or the field should be thrown open to others, and I have no doubt there are others ready and anxious to avail themselves of the opportunity. A monopoly that won't furnish the best service is a great drawback to any city and the people should not submit to it. Public opinion has great weight and it should make itself felt in this matter. Not having electricity within our reach for residence purposes is a positive detriment to every architect in Cincinnati—under such adverse conditions we cannot keep abreast of the times, our hands are tied; while the loss to the people on the hills, in the way of convenience, comfort, cleanliness and illuminating effects, is incalculable. The loss to the electrical trades you who are practical electricians can best appreciate.

Let us hope that public opinion and enterprise, so long in a state of lethargy, will, in this and other important civic matters, soon awaken and so powerfully assert itself that this shamefully neglected city will no longer in any respect be behind the times, but well up in the front rank of cities where she belongs and where her people should place and keep her.

PROGRAMME OF THE FIRST COMPETITION FOR BUILDINGS FOR THE PARIS EXPOSITION, 1900.

THE following is an extract from the programme of competition for the construction of the two "palais" on the Champs Elysées, illustrated in this number, together with plan of grounds and surroundings:

These two buildings are to replace the Palais de l'Industrie and the pavilion belonging to the city of Paris.

The competition was opened April, 1896. The plan published with this programme indicates the land which will be occupied by these two buildings and the manner in which they are to be placed, in order that they may form a part of the scheme for the exhibition of 1900, and at the same time not destroy the beautiful trees that now are growing in this district. Competitors must conform to these conditions, but with the understanding that the details of outline, form, distribution and dimension of buildings will be left entirely to themselves.

The competition and award will be separate for each building. Competitors are at liberty to develop either one or the other or

both of the plans, but should in each case at least show a general plan of relationship of the two buildings, with their surroundings.

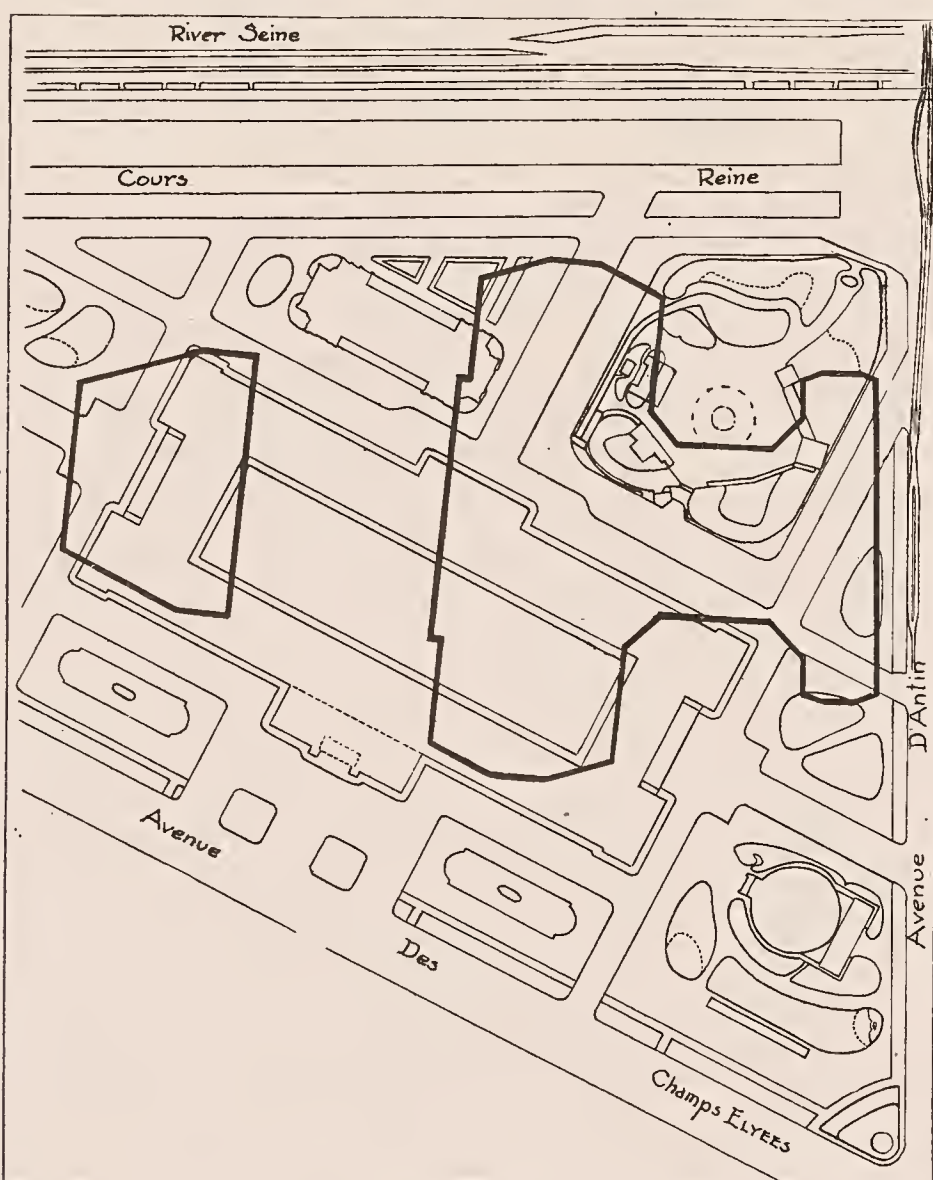
For the exterior, competitors should take into consideration the new promenade between the Champs Elysées and the Esplanade of the Invalides, and plan to retain the trees and plantings as much as possible.

Entire freedom is allowed competitors as to building materials to be employed, only the fact must be borne in mind that these buildings are to be permanent, and should be of durable materials and have a monumental character appropriate to their final use as fine arts buildings.

During the Exposition of 1900 the larger building will be used for the exhibition of contemporaneous art and an exhibit of the centennial of art, as well as for displays relative to art instruction. This centennial exhibit will include a series of galleries destined for the masterpieces of fine art and decoration which have characterized this century.

The floor space, all included, should be at least 40,000 square yards.

After 1900, the large building will be used principally for the annual Salon and also for different fêtes, entertainments, horse show, etc. For this large building there will be required a music hall capable of seating 1,500 persons; arrangements for general service such as a restaurant, rooms for photographing the exhib-



PLAN OF ENSEMBLE.

its; committee rooms; general offices; a police station; fire station, and living rooms for head janitor, etc.

The smaller building will hold in 1900 the exhibit of French retrospective art, and the floor space should be at least 7,000 square yards.

After 1901 this building will become an art museum, with halls for temporary exhibits, rooms for committees, living rooms for janitors, etc.

Besides plans, elevations and sections, the competitors should send in: first, a short explanation of the proposed work, method of construction, etc.; second, an estimate of the cost, calculated on a basis of square or cubic yards. The amount of \$3,400,000 for the larger building, and \$800,000 for the smaller building, must not be exceeded.

Competitors may add to the designs demanded, if they so desire, a perspective or details of any parts. They are free to submit the drawings either signed with their own name or not.

The competition is to be closed July 4, 1896. The jury of award will be composed as follows: the ministers of commerce, of industry, and of posts and telegraphs—the latter being president; seven directors of the exposition; presidents of five architectural and art associations, eight members of the city government, and twelve architects elected by the competitors; these to be such as either submit no designs, or if they themselves are competitors to have their designs signed by their own names.*

The prizes are as follows: For the large building—First prize, \$3,000; second prize, \$2,400; third prize, \$1,600; fourth prize,

*It is interesting to note that no member of the jury received any prize, but most of them being professors at the École des Beaux Arts, did not submit any designs.

\$1,200; fifth prize, \$800. For the small building—First prize, \$1,000; second prize, \$800; third prize, \$600; fourth prize, \$400; fifth prize, \$200.

Although the administration reserves complete liberty of action for the solution of all questions, both as to the study of final working designs and as to the supervision of the work, yet it agrees to be influenced by the choice of the jury.

In any case the jury is to make report of the points brought out in this examination of the design, and to notice any modifications which it would be desirable to make.

AWARD.

Fifty-nine competitors sent in designs, which were distributed as follows: Twenty-three included both buildings; twenty-six, the large building only; and ten, the small building only.

The first prize for large building was awarded to M. Louvet, while M. Girault received that of the smaller construction.

SYNOPSIS OF JURY'S REPORT.

The rather complicated shape of buildings and their relationship to the great avenue to be cut through, as is known, resulted from previous general sketches laid out by the exposition and city authorities, so that the fine trees at present on the grounds should remain undisturbed.

The above layout resulted in peculiar conditions as to central axis, etc., and served greatly to exercise the ingenuity of competitors.

All competitors had great difficulty in placing the necessary stairs near to the entrance, and of sufficient size, in the larger building.

Those competitors who opened a large perspective from the entrance and obviated the disagreeable impression now existing in the present Palais de l'Industrie, where one's view is limited to the large clock, were the most successful.

The T-shaped plan, awarded first and second prizes, is frequently found in the competition, and is an original idea which should be preserved and further developed in the final drawings.

The jury approves the combination which separates entirely the concert hall, so that there will be no trouble in the use at the same time of both the auditorium and the exhibition room. The jury regrets that a certain number of authors should have treated this hall as "a fine room suitable for other purposes as well as music," fearing that such a place which could be utilized for several purposes would wholly satisfy none.

In some of the plans submitted the ground floor was treated as a regular basement, and to be used during exposition as store-room for packing cases, etc. By this means visitors came directly into the galleries at a slight rise above the grand vestibule. Such arrangement would have a beautiful effect, particularly noble and even grand, and would greatly simplify the question of stairs; but by such treatment the jury was of the opinion that too much space was lost and consequently favored the use of two stories as more generally adaptable to all kinds of uses hereafter.

In regard to the smaller building, the report says the question was here simply one of a small museum, which first of all should be suitable for the Champs Elysées, and by the skill of the plan and design correct the irregularities of form necessitated by the shape of the ground, being in fact an extremely "liberal programme, and allowing great freedom of design."

The jury was unable to show a preference for the semicircular shape adopted by several architects, for, while it certainly gives a charming result when coming out of the great building opposite, yet there is risk of entirely destroying the effect of an avenue which should be preserved to guide the eye, without being distracted, to the very end of the landscape, where lies the Hotel des Invalides.

In the designs the jury deplores the too great tendency to give this building a festal and temporary appearance with an excess of decoration, since it is to be constructed of durable materials and for a permanent monument.

Also the abuse is noticed of the very frequent occurrence in this programme of excessively large doors. For great halls and grand auditorium rooms, especially for temporary and special purposes, where crowds are enormous and sometimes unmanageable, such entrances are essential; but for buildings like these there would seem nothing to justify such spaces entirely out of proportion with everything else.

JOHN STEWARDSON MEMORIAL SCHOLARSHIP COMPETITION.

FRANK MILES DAY, secretary of the managing committee of the John Stewardson Memorial Scholarship in Architecture, has issued the following preliminary announcement for the second competition:

The managing committee of the John Stewardson Memorial Scholarship in Architecture announces by authority of the trustees of the University of Pennsylvania, who act as trustees of the Memorial Fund, a competition for a scholarship of the value of \$1,000, the holder of which is to spend one year in travel and in the study of architecture in Europe under the direction of the committee.

Candidates must be under thirty years of age, and must have studied or practiced architecture in the State of Pennsylvania for the period of at least one year immediately preceding the first day of March, 1898.

Candidates are required to pass the following:

PRELIMINARY EXAMINATIONS.

Freehand Drawing.—A five hours' study of an architectural subject from

the cast will be required at the time of the examination, either in pencil, charcoal or crayon, as the candidate may elect.

In addition each candidate will be required to show the examiners six examples of his work in pencil, color, and pen and ink, all these mediums to be represented.

History of Architecture.—Written examination. A knowledge of the subjects treated in Smith and Slater's "Classic Architecture" and T. Roger Smith's "Gothic and Renaissance Architecture."

Construction.—Written examination. A knowledge of Clark's "Building Superintendence," and familiarity with the use of Kidder's and Trautwine's handbooks.

French or Italian.—Ability to translate at sight any passage in Laloux's "Architecture Grecque," or an equivalent work in French or Italian, as the candidate may elect.

The preliminary examinations will take place at the School of Architecture of the University of Pennsylvania, on Tuesday, Wednesday and Thursday, March 1, 2 and 3, 1898.

No candidate will be admitted to the final examination who receives less than sixty per cent of the marks in construction, history, and French or Italian, and less than seventy-five in drawing.

Graduates of any of the recognized schools of architecture (as approved by the committee), or any candidate who has in a previous year passed any preliminary examination of the John Stewardson Memorial Scholarship in Architecture or of the Traveling Scholarship in Architecture of the University of Pennsylvania, will be exempted from such examination in this competition.

FINAL EXAMINATION.

There will be required in the final examination a design for a farmhouse and farmstead.

These buildings are to be designed for the use of a man of means whose hobby is farming. They are to form a group consisting of a farmhouse to be occupied by the owner, stabling, barns, wagon sheds, farmyards, flower garden, kitchen garden, farmer's cottage, gardener's cottage, etc.

The farm is located in Delaware County, Pennsylvania, a rolling country, well wooded and watered.

The manner of treatment and choice of materials are left to the competitor.

The specific requirements of the buildings, the number, kind and scale of drawings, and other conditions, will be made known on Saturday, March 5, when each candidate will make a preliminary sketch at the School of Architecture, in the twelve hours between 10 A.M. and 10 P.M.

The final drawings will also be made at the school, which will be open to the competitors every weekday from 8 A.M. to 11 P.M. They are to be handed in on or before 10 P.M. on Saturday, March 26.

The award will be made by a jury of architects, none of whom will be members of the managing committee.

The scholarship will be awarded on the result of the examination in design; but the marks in the preliminary examinations may be taken into account in case of doubt on the part of the jury as to the relative merits of competitors in design.

The successful competitor will be required to sail for Europe not later than April 15, 1898.

Inquiries may be addressed to Prof. Warren P. Laird, School of Architecture, University of Pennsylvania, Philadelphia.

JOHN C. SIMS,
WARREN P. LAIRD,
WALTER COPE,
FRANK MILES DAY,
WILSON EYRE, JR.,
Managing Committee.

PHILADELPHIA, January 1, 1898.

ASSOCIATION NOTES.

ARCHITECTURAL LEAGUE OF NEW YORK.

The thirteenth annual exhibition of the Architectural League of New York was opened in the American Fine Arts Society's building at 215 West Fifty-seventh street, with a reception on Friday evening, February 11.

ST. LOUIS ARCHITECTURAL CLUB.

At the last annual meeting of the St. Louis Architectural Club, the following officers were elected for the ensuing year: William B. Ittner, president; Frank Burford, first vice-president; H. G. Eastman, second vice-president; Emil H. Niemann, secretary; J. C. Stephens, treasurer, and R. M. Milligan and Benno Janssen, executive board.

NEW JERSEY SOCIETY OF ARCHITECTS.

The New Jersey Society of Architects have adopted a code of ethics with fifteen sections which seems to include all the "Thou shalt nots" of the profession. At the meeting at which this code was adopted the following officers were elected: President, Albert Beyer, Hoboken; first vice-president, Paul G. Botticher, Newark; second vice-president, James H. Lindsley, Newark; secretary and treasurer, George W. von Arx, Jersey City; trustees, Thomas Cressey, Charles P. Baldwin, Benjamin F. Hurd, F. F. Martinez, Jr., Herman Kreidler and R. W. Sailer.

BALTIMORE DRAFTSMEN.

The annual meeting of Baltimore Chapter, No. 2, of the Association of American Draftsmen was held January 6 at its hall, corner of Saratoga and Paca streets. The following officers were elected: James W. Lee, president; William T. Hoofnagle, vice-president; John H. Spousler, secretary, and D. D. Thomas, Jr., treasurer. John H. Parker read a paper, which was illustrated by thirty-five stereopticon views, upon the works and mechanical processes of the Crown Cork & Seal Company. The Chapter meets on the first Thursday of each month.

EXHIBITION OF PITTSBURG CHAPTER A. I. A.

Every effort is being put forth to have the first exhibition of architectural drawings and designs, under the direction of the Pittsburgh Chapter of the American Institute of Architects, which will be held at Carnegie Art Gallery from May 2 to 31, inclusive, a decided success.

The committee on arrangements are anxious to make their first effort an affair of magnitude, that will insure a lively interest in future exhibitions, which will be held annually.

In addition to a large collection of drawings from local architects, there will be an exhibit from architects of New York, Philadelphia, Boston, Cleveland, Chicago and other large cities. A

catalogue that will be issued will contain illustrations of the best designs and drawings, and will be valuable as a book of reference.

The committee on arrangements includes the following architects: George S. Orth & Brothers, Thomas Boyd, T. D. Evans, Bartberger & East, William Ross Proctor, Rutan & Russell, Edward Stotz, J. Edward Keirn, S. F. Heckert, J. S. Beatty, J. T. Steen, H. D. Gilchrist, Alden & Harlow, Charles Bickel, J. E. Allison, Struthers & Hannah and J. M. Alston.

SPECIAL COMMITTEES, A. I. A., FOR 1898.

The special committees of the American Institute of Architects for 1898 are as follow:

Legislative Committee on Government Architecture.—George B. Post, chairman. Committee—Bruce Price, New York, N. Y.; John M. Carrere, New York, N. Y.; James G. Hill, Washington, D. C.; Alfred Stone, Providence, R. I. Alternates—Edward H. Kendall, New York, N. Y.; H. J. Hardenbergh, New York, N. Y.; Robert Stead, Washington, D. C.; R. S. Peabody, Boston, Mass.

Committee on National Building for the Institute.—Daniel H. Burnham (chairman), Chicago, Ill.; George B. Post, New York, N. Y.; H. Langford Warren, Boston, Mass.

Committee on Building Laws.—T. M. Clark (chairman), Boston, Mass.; Napoleon Le Brun, New York, N. Y.; Alfred Stone, Providence, R. I.

Committee on Applied Arts and Sciences.—James B. Cook (chairman), Memphis, Tenn.; T. C. Link, St. Louis, Mo.; G. L. Norrman, Atlanta, Ga.

Delegate to National Conference on Standard Electrical Rules. Alfred Stone, Providence, R. I.

NATIONAL SCULPTURE SOCIETY.

The third exhibition of the National Sculpture Society will be held in the galleries of the building of the American Fine Arts Society, 215 West Fifty-seventh street, New York City, beginning April 30, 1898, and will be open for two weeks.

The scope of the exhibition will include works of sculpture, examples of applied sculpture, architectural casts, bronze, silver and metal work, and photographs of sculpture in America.

The designs submitted in the competition for a design for a sun dial, instituted by Mr. T. Kelly, of New York, in which a very wide interest has been manifested, will form one of the notable features of the exhibition.

No works will be admitted to the exhibition which have been shown at any previous exhibition held by the society, and it will not, in any event, collect nor return exhibits. The society will in no sense be responsible for accidents arising from noncompliance with the rules of the exhibition. The exhibition will be covered by insurance effected by the society.

DATES.—Exhibit entry blanks must be returned not later than March 1, 1898. Exhibits will be received April 25 and 26, 1898. Positively no works received after these dates. Exhibition opens April 30, 1898.

All exhibits must be delivered at 215 West Fifty-seventh street at the owner's risk and expense. Packing cases will not be received at the galleries.

Nonresidents must send their exhibits to a New York consignee for delivery to the galleries. Exhibits may be consigned to

CONSIGNEES—William S. Budworth & Son, No. 424 West Fifty-second street; William Schill, 81 University place; J. Harrison Mills, No. 147 East Twenty-third street.

IMPORTANT.—It is important that entry blanks be returned to the secretary of the society at as early a date as possible.

Pedestals will be furnished by the society.

Large pieces of sculpture requiring more than two men to handle may be examined by the jury of selection at the sculptor's studio if in New York or Brooklyn.

Exhibits will be accepted on condition that they shall not be withdrawn before the close of the exhibition, though it should be extended beyond the limit herein set.

All works must be removed within two days after the close of the exhibition. Those not removed will be stored at the owner's risk and expense.

Of previous circulars, No. 1 is a preliminary announcement of the exhibition; No. 2 contains the conditions for the sun-dial competition; No. 3 relates to the proposed collection of photographs of sculpture in America.

Names of intending or probable exhibitors, with the correct address, may, at any time, be sent to the secretary of the society, Mr. Barr Ferree, 112 Wall street, New York, for filing for future circulars. The society cannot undertake to reach names not on its register.

The exhibition committee is as follows: Daniel Chester French, chairman; Barr Ferree, secretary; Herbert Adams, Karl Bitter, John H. Boyle, Thomas Shields Clarke, J. S. Hartley, Thomas Hastings, C. R. Lamb, Charles H. Niehaus, I. Wyman Drummond.

December 15, 1897.

BARR FERREE, *Secretary.*

CHICAGO ARCHITECTURAL CLUB.

The Eleventh Annual Exhibition of Works of Architecture and the allied Fine Arts, will be held at the Art Institute, Chicago, under the auspices of the Chicago Architectural Club, from Wednesday, March 23, to Friday, April 15, 1898. This exhibition of original works not previously shown in Chicago, will include: 1. Architectural sketches and perspectives in all renderings; 2. Projects for public and monumental work; 3. Scale details of public and private work; 4. Interior decorations and furnishings

(samples and sketches); 5. Sculpture—architectural and decorative; 6. Landscape architecture; 7. Architectural and decorative metal work.

Exhibits addressed to the Chicago Architectural Club will be received at the basement of the Art Institute not later than Friday, March 11, 1898. All drawings must be framed or mounted. No exhibit will be insured.

A jury of admission, composed of men well known in the different arts, will pass upon works offered for exhibition.

An illustrated catalogue will be issued, for which is reserved the right to reproduce any exhibit unless especially requested not to do so.

The Exhibition Committee consists of: F. W. Kirkpatrick, chairman; N. Max Dunning, Victor Andre Matteson, Birch Burdette Long, Harry C. Starr, Hugo Arnold, Clarence Hatzfeld.

The following circular letter regarding the Illinois Chapter medal award has been issued:

To the Illinois Chapter, A. I. A., and the members of the Chicago Architectural Club:

GENTLEMEN,—The committee in charge of the Chapter Medals for the Chicago Architectural Club's exhibit of 1898, before deciding upon a basis of award, have gone rather carefully into the motives which seemed most prominent at the time the Chapter award was first inaugurated, some four years ago.

As far as this committee has been able to determine the object and wish of the Chapter at that time was to encourage the general character and excellence of the exhibit itself, and especially that portion of it representing the personal efforts of the club members as distinguished from the work collected from other sources.

It was thought by offering some liberal incentive the members might more generally put forth an effort in a perfectly free and unrestrained way for the support of their part of the exhibit, so that it might be as large and as excellent as possible and a fair representation of the club's artistic status.

The Chapter did not wish to institute a competition, as generally understood, with all the cut-and-dried restrictions attendant upon the solution of a fixed problem in regard to which the special ability of some might overpower the higher general ability of others, but by giving free scope to the abilities of all, encourage each to put forth an extra effort, not for the purpose of securing a medal, but to assist in maintaining a high standard for the club's share of the exhibit.

The club has already several regular competitions with fixed programmes in connection with which an ample indulgence in the restrictive competitive system may be had, and the Chapter had in mind a rather broader idea when it proposed an award for the encouragement of the public exhibit of the club.

The Chapter recognizes the great difficulty of fairly making an award in any kind of competition, and will admit, if it is insisted upon, the especial difficulty of making an award of the nature contemplated.

The Chapter is not, however, in any way disheartened or discouraged because of the comparative failure of its effort upon some previous occasions, but is of the opinion that a neglect to fully express its motive has led quite naturally to a misunderstanding as to what it has undertaken to do. For this it can in no way lay a particle of blame upon the club or its membership, but wishes now to begin anew, as it were, by clearing away any possible misapprehension that may have hitherto existed.

The Chapter wishes, therefore, to acknowledge the purely architectural abilities of the club as represented by individual work presented at the club's annual public exhibits. This acknowledgment will be in the form of three medals—gold, silver and bronze—to club members in their comparative order of merit.

The Chapter does not reserve the right to withhold its award for any real or fancied inferiority of the club's work, but only reserves the right to discontinue its practice or change its programme upon due notice for future occasions.

The following brief rules will govern this matter in the exhibit of 1898:

RULES.

The award will be limited to club members who will not have been practicing architects for more than two years previous to the first day of the exhibit.

The awards will be based upon a judgment of the collective exhibit of the respective candidates, no part of which shall have been publicly exhibited in Chicago.

All previously unexhibited competitive work of the club is admissible.

The number of exhibits by any one member will be taken into consideration as well as the special excellence of some one particular work.

Each candidate may designate the works of his collective exhibit he wishes grouped for consideration relative to this award, and it is understood that work so designated but placed with other special groups of competitive work, etc., will still be considered a part of his group.

Work to be considered at all must be designed and rendered by the exhibitor, but the design rather than the technic will be considered.

The awards will be made exclusively upon merit in architectural design, and designs of entire structures, rather than detailed bits, will receive preference in the ultimate selection.

It is possible that the club's hanging committee may not consent to arrange the works entered for this award in individual groups. In such case the selection will be made through the next best means available.

The following gentlemen will be requested to act as judges: Peter B. Wight, William W. Clay, Harry B. Wheelock. If any vacancies occur, the names of those appointed to fill them will be duly posted in the clubrooms.

The decision of the judges will be made in time to publish the awards and decorate the groups upon the opening night of the exhibit, and the latest possible time limit for presenting the exhibits will be duly posted in the clubrooms by the judges—probably about one week before the opening.

DANKMAR ADLER, President.
D. H. PERKINS, Secretary.

NEW PUBLICATIONS.

EDWIN D. WEARY, in his catalogue of architectural modeling of Charles Emmel, has listed an extraordinary amount of special designs which are intended to meet the requirements of architects. In the line of capitals a very wide range is observed, and an equally complete variety in relief ornament. The catalogue contains several thousand specimens of relief modeling, and its exceptional structural quality for outdoor or indoor application, together with its excellence of execution, gives a scope in design which should be generally appreciated.

THE New Year number of the *Canadian Architect and Builder*, Toronto, just published, is an artistic and altogether creditable production—in keeping with the importance of the building interests. It consists of forty pages of letterpress and ten plates illustrative of architecture in the various parts of the Dominion. Among the more important features of this number are: A double-page plate of portraits of prominent Canadian manufacturers of building materials and appliances; a double

plate showing perspective view of the proposed Victoria Square opposite the new City Buildings, Toronto; an illustrated article on the recent building disaster at London, Ontario; an article by Mr. G. A. Reid, R. C. A., on mural decoration, with reproduction of panels designed to adorn the walls of the new City Buildings, Toronto; an article on the American tall building, by Professor Capper, of McGill University; a report of the recent convention of the Ontario Association of Architects, etc.

POCKET HANDBOOK OF ELECTRO-GLAZED LUXFER PRISMS; Containing Useful Information and Tables Relating to their Use, for Architects, Engineers and Builders. Edited by Henry Crew, Ph. D., and Olin H. Basquin, A.M. 12mo, 287 pages. \$2. Published by the Luxfer Prism Companies.

This is an encyclopædic dictionary of the Luxfer prism. It elucidates, in a clear manner thoroughly in keeping with the subject, the entire range of actualities and possibilities of these remarkable light-bearing lenses. Beginning with a simple explanation of what the Luxfer prism is, inserted doubtless for purposes of completeness, for certainly no architect, engineer or builder is unfamiliar with this comparatively new invention, the editors have proceeded to give in text, illustration and tables every conceivable item of information relative to the styles, sizes, methods of manufacture, uses, and the proper selection, adaptation and specification of Luxfer prisms for particular purposes. It is stated in the preface that the features of the present edition of the handbook are: "A series of suggestions, illustrations and diagrams, calculated to show how Luxfer prisms may be applied, and to aid those who intend to use them in making such application, a series of tables, which comprise the information or data sufficient to enable anyone to determine the kind and quality of Luxfer prisms to be used under the conditions of any given case; views and testimonials showing to what extent, and with what degree of satisfaction, the Luxfer prisms have been used." These three departments the editors have treated *in extenso*, and if there shall ever again arise a necessity for another edition of this valuable little work, it will not be because of anything of importance omitted from the present edition, but because some new and unexpected situation shall have arisen in which the Luxfer prisms can be used to great advantage, or because of a still greater volume and even more cordial warmth in new testimonials—both of which contingencies are very likely to arise. To one who saw the beginnings of the prism movement in its present form, only one short year ago, this volume is a revelation. The first prisms made were necessarily of a very rudimentary and simple character; yet they proved to be such a wonderful improvement over anything in that line that had been known previously, that they opened up vast architectural possibilities in the way of daylight, and it was at once recognized by leading architects and builders that these prisms were destined to revolutionize methods of construction. Fortunately the men who secured control of the prism patents represented the highest intelligence and controlled the largest capital available at that time for just such an enterprise. The board of directors of the company are men from the highest business circles in Chicago, and have surrounded themselves from the beginning of the enterprise with the best of architectural and engineering talent, with the result that the development of the Luxfer prism idea is strictly along the most approved scientific lines. The close study which has been devoted to the perfection and promotion of this enterprise has resulted in bringing the Luxfer prism to the attention of the entire building world, within the short space of a twelvemonth, as a new building material, having a range of possibilities that is fairly startling. This rapid progress is indicated, in its final results, by the "Handbook." The fact that the Luxfer Prism Companies are protected by more than 160 patents, enables them to fully make known every detail of design and manufacture without fear of imitation by competitors. They have, therefore, set forth in this little book all the minute details of Luxfer prism construction with a clearness and completeness seldom, if ever, seen in a publication of this kind. The architect is enabled, by reference to the tables and the design drawings, both of which are very numerous, to specify with exactness the most desirable prism construction for any architectural condition that may arise. The practical use of the prisms is thus reduced to an exact science, and has been raised from the experimental stage to a distinct and definite branch of architectural specification and construction. Both theory and practice are liberally deduced to prove that by the use of these prisms dark rooms and basements with court or alley exposure have been made available for occupancy, and are now actual income producers, with a plentiful supply of natural light, where formerly they were wholly dependent on artificial light, and were almost worthless commercially. A feature of the tables which have been inserted in this work is that by their use the required angle of prisms to meet the existing sky line may be accurately specified, so as to carry the rays of light in any direction desired, and also that by the use of prisms of varying angles the rays of light may be thrown upon any desired point in the room.

OBITUARY.

JAMES FRERET.

James Freret, who died at New Orleans on December 11, 1897, was born in that city April 25, 1838, and received his education at the Jesuit College there. In 1860, he went to Paris and studied at the École des Beaux Arts, attending at the same time as H. H. Richardson. When the war broke out, he returned to

enter the Southern army, landing at Charleston in 1861, after having run the blockade. He joined the army in the engineering corps under Col. J. J. Freeman. He was at the siege of Port Hudson, and, while there, was wounded by the explosion of a shell; was taken prisoner and later exchanged, but was disabled and retired from active service. After the war, he took up his profession, designing and erecting some of the largest buildings in New Orleans, among which are the following: Louisiana Sugar Exchange, Produce Exchange, Masonic Temple, St. Patrick's Hall and many Catholic churches and residences, all of which bear testimony to his ability. He was a prominent Catholic and a member of several clubs, including the New Orleans Chess, Checker and Whist Club. The immediate cause of his death was heart disease, which was augmented by the wound sustained at Port Hudson.

OUR ILLUSTRATIONS.

Fire Patrol Building, New York City.

Philadelphia Art Club. Frank Miles Day & Bro., architects.

Lower Stories, St. James Building, New York. Bruce Price, architect.

The City Trust, Safe Deposit and Surety Company's Building, Philadelphia. Wilson Eyre, Jr., architect.

Dining Room Mantel in house at Scranton, Pennsylvania.

E. G. W. Dietrich, architect, New York City.

Photogravure plate: Detail of Offices of Home Life Insurance Company, New York City. N. Le Brun & Sons, architects.

Library in Residence of F. E. Platt, Scranton, Pennsylvania. E. G. W. Dietrich, architect, New York City. View in hall is also shown.

Residence for Miss E. J. Platt, Scranton, Pennsylvania. E. G. W. Dietrich, architect, New York City. An exterior view and view in hall are shown.

Competition for the Small Palace of the Paris Exposition of 1900. First prize design, C. Girault, architect; second prize design, Cassien, Bernard & Cousin, architects; third prize design, Toudoire & Pradelle, architects.

Competition for the Grand Palace of the Paris Exposition of 1900. First prize design, A. Louvet, architect; second prize design, Deglane & Binet, architects; third prize design, M. Thomas, architect; fourth prize design, C. Girault, architect.

Corrections: The architects of the Brooklyn Public Medical Library, published in December, 1897, number, were Waid & Cranford. In the January issue was published a building entitled "Business Building, Philadelphia." This should be "Whitman & Barnes' Warehouse, Cincinnati," by A. O. Elzner, architect.

PHOTOGRAVURE PLATES.

Issued only with the Photogravure Edition.

The New Delmonico's, New York City. James Brown Lord, architect.

The Astoria Hotel, New York City. Henry J. Hardenbergh, architect.

Extension of Renaissance Hotel, New York City. Howard & Cauldwell, architects.

Detail of Postal Telegraph Building, New York City. George Ed Harding and Gooch, architects.

Detail of Office Building, National Bank of Commerce, New York City. James B. Baker, architect.

Gillender Building, New York City. Berg & Clark, architects. Two views are given: General view; detail of lower floors.

MOSAICS.

A bill providing for the examination and licensing of architects, similar to that adopted a year ago in Illinois, is being drafted by the architects of the State of Ohio, to be placed before the legislature for passage during its present session.

THE Detroit Architectural Sketch Club have inaugurated a series of papers on the history of architecture, to be given in the Museum of Art. The papers will be as follows: "Egyptian Architecture," by William Reed Hill; "Greek," John W. Case; "Roman," H. J. Maxwell Grylls; "Gothic," James E. Scripps; "Renaissance," Albert Kahn.

In the present number is printed, from advance sheets of the forthcoming *Atlantic Monthly*, an article by Russell Sturgis, upon the "Proper Education of an Architect." Mr. Sturgis deals very vigorously and iconoclastically with the present status of architecture and the architects, and brings a very strong indictment against the present methods of architectural teaching, which he denounces as utterly wrong and misdirected.

THOSE who inhabit high buildings say that the dust nuisance is greatly increased with the height above the ground. Dust filters have been devised to relieve the condition, and in a building of 500,000 cubic feet capacity a peck of dust a month is caught. Another curious thing is that there is a fly line at the sixth or seventh story. If they are carried up in the elevators above this line they find a window at once, fly out and plunge downward to their normal level of activity. Indeed, they in reality fall down, the air being too rarified to sustain them. Deep-sea fishes fall up if they rise above a certain level. The swimming bladder is so distended that they cannot stay down, but fall up or float up, and when they reach the surface they are a mass of jelly. All of which

shows that each one must stay at his own level and in his own element if he would survive.

It having been decided to remove the auditing department of Westinghouse, Church, Kerr & Co. from their New York to their Pittsburg office, it became necessary for Mr. Warren L. Murray, the auditor, and Mr. Gardner W. Kimball, his associate, to remove their residences permanently to the western city. Mr. Murray has been connected with the company for fifteen years, and Mr. Kimball nearly as long, and during this long service have so won the respect and love of their associates that the latter determined to give them a send-off in the shape of a farewell dinner. This took place in the large private dining room of Mouquin's Fulton Street Restaurant on the evening of January 5, and was taken advantage of by all of the engineering force of the company who were within reaching distance of New York. Plates were set for twenty-two, with Mr. W. C. Kerr at the head of the table, with the guests of the evening on his right and left, and Mr. O. L. Williams, treasurer, at the other end in the capacity of toastmaster. The others present were Messrs. E. H. Sniffen, C. M. Vail, Edwin Yawger, F. B. Church, Herman Nieter, L. C. Bullington, G. A. Sacchi, F. E. Caldwell, Robert Zabriskie, E. L. Phillips, Nelson W. Perry, A. R. Miller, J. F. Eggers, C. W. Perkins, W. W. Churchill, A. T. Nickerson, Jr., H. R. Kent and Francis Blossom. The menu, or "specification" as it was called, which was the joint work of several of the brightest members of the force, would have been the despair of a French chef, and was an enigma in some respects to the engineers themselves, but, when the mask of technical terms was removed, proved acceptable in every way. The mental feast was inaugurated by Mr. Kerr, who remarked that this was the first occasion on which the force had been gathered together in this way, and suggested that an annual, or even more frequent dinner might be an excellent idea. After expressing his appreciation of the long and faithful services of the departing guests, the regular toasts were called by Mr. Williams, and these continued for the remainder of the evening, everyone present being called upon to respond. Late in the evening, presentations in token of the high regard in which Messrs. Murray and Kimball were held were made in the name of the members of the force, and thus ended one of the most pleasant affairs in the history of Westinghouse, Church, Kerr & Company.

PERSONAL.

ARCHITECTS Carrere and Hastings, of New York, have removed their offices to 28 East Forty-first street, Madison avenue.

ARCHITECT FRANK E. WETHERELL has retired from the firm of Shank & Wetherell, 700 Observatory Building, and has associated himself with Architects Richardson & Hotchkiss, Dime Savings Bank building, Peoria, Illinois, under the firm name of Richardson, Wetherell & Hotchkiss.

AFTER a period of eight years passed in the best architectural schools and in the offices of prominent practitioners in New York and Boston, S. F. Rosenheim is associated with his brother, A. F. Rosenheim, of St. Louis, under the firm name of A. F. & S. F. Rosenheim, St. Louis and Boston.

SINCE the decease of F. A. Coburn, of Cleveland, Frank Seymour Barnum has associated with himself, under the firm name of F. S. Barnum & Co., Harry S. Nelson, Albert E. Skeel, Herbert B. Briggs and Wilbur M. Hall. These gentlemen have all been connected with the office for a number of years.

PROF. FRANCIS W. CHANDLER, of the Massachusetts Institute of Technology, has been appointed chief architectural supervisor for the city of Boston under the title of Consulting Architect. The architectural division has been taken from the building department and attached to the engineering department of the city.

SYNOPSIS OF BUILDING NEWS.

Architects are invited to furnish for publication in this department monthly or occasional reports of their new work before the letting of contracts. Reports of buildings costing less than \$5,000 are not published.

Chicago, Ill.—Architect Morrison H. Vail: For Mrs. C. A. Vincent, a two-story, basement and attic residence; to be erected at the northwest corner of Sunnyside avenue and Paulina street, Ravenswood; to be of frame with stone basement, have oak finish, gas and electric fixtures, hot-water heating, gas ranges, mantels, sideboards, consoles, etc. For John Freud, a two-story, basement and attic frame residence; to be erected at Belleplaine avenue near North Lincoln street, Ravenswood; to have a stone basement, hardwood finish, mantels, sideboards, hot-water heating, electric light, gas ranges, etc. Also two two-story flat buildings, each 33 by 58 feet in size; to be erected at North Hamilton avenue, Ravenswood; they will have pressed brick and stone fronts, oak and pine finish, steam heating, gas ranges and fireplaces, gas and electric fixtures, electric bells and speaking tubes.

Architect P. W. Anderson: For Robert Crawford, a three-story store and flat building, 24 by 85 feet in size; to be erected at 1789 California avenue; to have a front of buff Bedford stone, oak interior finish, gas fixtures, steam heating, electric light, gas ranges and fireplaces, electric bells, speaking tubes, etc. For Sylvester G. Abbott, a two-story and basement flat, 25 by 65 feet in size; to be erected at 6753 Peoria street; Bedford stone front; oak finish, gas fixtures, steam heating, mantels, sideboards, etc.

Architect Simeon B. Eisendrath: For John Martin, a three-story apartment house, 55 by 150 feet in size; to be erected at Sixtieth street and Prairie avenue; it will have two fronts of pressed brick and buff Bedford stone, oak finish, mantels, sideboards, consoles, grill work, oak floors, gas and electric fixtures, laundry fixtures and driers, electric bells, speaking tubes, gas ranges and fireplaces, cement basement and sidewalks, gravel and tile roof, hard plaster, electric light, steam heating; cost \$50,000.

Architects Hessenmueller & Meldahl: For Mrs. M. Danielson, a three-story and basement apartment house, 50 by 110 feet in size; to be erected at

Kenmore and Graceland avenues; it will have a buff Bedford stone front, hardwood interior finish, mantels, sideboards, consoles, grill work, gas and electric fixtures, gas ranges and fireplaces, electric light, cement basement and sidewalks, steam heating, laundry fixtures, etc.; cost \$27,000. For K. Storgaard, a three-story and basement flat building, 25 by 95 feet in size; to be erected at Division street near Western avenue; the front will be of buff Bedford stone, interior to be finished in oak and Georgia pine, have mantels, sideboards, steam heating, gas fixtures, electric bells, speaking tubes; cost \$9,000. Also letting contracts for a three-story and basement flat building, 40 by 60 feet in size; to be erected at Sherman street, near Sixty-third street; to be of pressed brick and stone front, have oak and pine finish, gas and electric fixtures, steam heating, electric light, gas ranges and fireplaces, mantels, sideboards; cost \$14,000.

Architect R. B. Powell: For Frederick Ristone, a three-story and basement flat building, 40 by 65 feet in size; to be erected at Eastwood avenue; it will be of pressed brick and stone front, have oak and pine finish, gas fixtures, furnaces, electric light, mantels, consoles, electric bells, speaking tubes; cost \$10,000. For F. Russell, two two-story and basement flat buildings, 22 by 50 feet each; to be erected at Ravenswood; to have pressed brick and stone front, oak and pine finish, steam heating, electric light, mantels, sideboards, consoles, grill work; cost \$12,000.

Architect J. G. Simpson: Making plans for a three-story and basement flat building, 50 by 91 feet in size; to be erected at Sixty-second street and Madison avenue; to be of buff Bedford stone first story, and the rest of stone and pressed brick, have oak and Georgia pine finish, gas and electric fixtures, steam heating, electric light, laundry fixtures and driers, cement work, etc.; cost \$30,000.

Architect H. S. McMullen: For J. D. Rowe, a two-story and basement flat building, 22 by 56 feet in size; to be erected at 109 Albany avenue; to have a buff Bedford stone front, oak and pine finish, gas and electric fixtures, steam heating, mantels, sideboards, electric bells, speaking tubes; cost \$7,000.

Architect F. B. Abbott: For J. P. Forsythe, a two-story and basement residence; 40 by 40 feet in size; to be built at Winfield, Illinois; to be of frame with stone basement, have furnace, gas fixtures, mantels, sideboards, electric bells; cost \$5,000. For John Druecke, a fifteen-story warehouse; 75 by 160 feet in size; to be erected at 111 to 121 North Canal street; to be of pressed brick front, steel construction, have elevators, electric light, steam heating, engines, boilers, etc.; cost \$300,000.

Architect C. F. Sorensen: For A. Kolsen, a three-story flat building; 60 by 100 feet in size; to be erected at Buena Terrace; pressed brick and stone front, oak finish, steam heating, electric light, gas ranges and fireplaces; cost about \$30,000.

Architects Church & Jobson: For George E. Watson, a two-story, basement and attic residence; 26 by 65 feet in size; to be built at North Edgewater; to be of frame, stone basement, oak finish, hot-water heating, gas and electric fixtures, gas ranges, etc.; cost \$5,000. For R. M. Jaffray, a three-story flat building; 27 by 68 feet in size; to be built at 1477 Wellington avenue; to have a buff Bedford stone front, hardwood finish, mantels, furnaces, gas and electric fixtures, etc. For Miss R. E. Gilbert, a two-story, basement and attic frame residence; 32 by 54 feet in size; to be built at North Edgewater; stone basement, oak finish, furnace, gas and electric fixtures, mantels; cost \$6,000.

Architect J. L. Silsbee: For King & Andrews Company, a foundry building; 150 by 200 feet in size; to be erected at Chicago Heights; common brick.

Architects Oscar Cobb & Son: Making plans for remodeling Calumet Theater, at South Chicago; will put in electric light plant, steam heating, plumbing, tin roof, stained glass, scenery, gas fixtures, opera chairs, etc.; cost \$40,000.

Architects Wilson & Marshall: Made plans for a fine three-story residence; 40 by 50 feet in size; to be erected at Graceland and Pine Grove avenues; it will be of buff pressed brick with Bedford stone trimmings, have slate roof, fine cabinet interior finish, specially designed mantels, sideboards, consoles, buffet and grill work, cabinets and hall trees, electric light, electric heating and cooking ranges, also furniture, beds and linen will be provided; cost about \$16,000. Also made plans for a three-story residence, 60 feet front; to be erected next to above; it will be of stone with tile roof, have elegant finish; also will be provided with electric heating, lighting and cooking apparatus similar to above residence; it is for W. J. Bulger, and will cost \$25,000. Same architects made drawings for two three-story residences, 30 by 90 feet each; to be erected at Grand boulevard and Forty-ninth street; they will have stone fronts, tile roofs, fine cabinet finish, special mantels, sideboards and consoles, electric light, hot-water heating; cost \$25,000 each. Same architects made drawings for the remodeling of Brevoort House, on Madison street; will put on new iron front, fine interior finish, marble, mosaic and bronze, best of nickel-plated plumbing, electric light, elevators, steam heating, etc. For Oscar Anderson, a four-story apartment house, 48 by 96 feet in size; to be erected at Grand boulevard and Forty-third street; to have a stone front, hardwood interior finish, mantels, sideboards, consoles, nickel-plated plumbing, gas and electric fixtures, steam heating, electric light, marble and tile work, etc. Also two two-story and basement residences, to be erected at Monroe street near Homan avenue; Bedford stone fronts, oak finish, gas fixtures, mantels, sideboards, gas ranges and fireplaces, electric bells, speaking tubes; cost \$10,000. For Richard J. Murphy, a two-story store and flat building, at Thirty-first street and Center avenue; pressed brick and stone front, modern plumbing, gas fixtures, mantels, sideboards, electric bells, etc.

Architect Thomas McCall: For Joseph Cormack, a three-story and basement apartment house, 50 by 60 feet in size; to be erected at 6017-6019 Woodlawn avenue; pressed brick and stone front, hardwood finish, mantels, sideboards, gas and electric fixtures, steam heating, gas ranges, etc.; cost \$20,000.

Architect Charles W. Van Keuren: For Mrs. C. V. McCullough, a two-story, basement and attic frame residence, 26 by 45 feet in size; to be erected at River Forest; to have stone basement, oak finish, hot-water heating, mantels, sideboards, electric light, etc. Also making plans for a twelve-flat building, 50 by 90 feet in size; to be erected at Oak Park; to have a buff Bedford stone front, hardwood finish, the best of modern plumbing, copper cornice, gas and electric fixtures, mantels, sideboards, cement basement and sidewalks, electric bells, etc.; cost \$30,000. Also three-story flat building, 25 by 60 feet in size; to be erected at 23 De Kalb street; pressed brick and stone front, gas fixtures, open plumbing, mantels, sideboards; cost \$8,000.

Architect W. F. Gubbins: For F. E. Halligan, a three-story flat building, 56 by 75 feet in size; to be erected at 872-876 Jackson boulevard; to have a pressed brick and stone front, modern sanitary plumbing, gas and electric fixtures, steam heating, electric light, gas ranges; cost \$20,000.

Architect C. W. Rapp: For R. H. Fleming, a two-story store, 75 by 90 feet in size; to be erected at Forty-third street near Ellis avenue; to be of iron and plate glass and terra cotta front, have the necessary plumbing, electric light, elevators, steel beams and columns, cement work, etc.; cost \$15,000.

Architect George L. Harvey: Made plans for a three-story store and flat building, 110 by 112 feet in size; to be erected at 13-23 South Forty-eighth avenue; to be of pressed brick and stone front, have hardwood finish, mantels, sideboards, gas and electric fixtures, steam heating, gas ranges and fireplaces, marble and tile work, electric bells, speaking tubes, cement work; cost \$30,000.

Architect Arthur W. Cole: For A. W. Cole and E. E. Hill, two two-story and basement residences, 48 by 50 feet in size; to be erected at Greenwood avenue near Fifty-fourth street; pressed brick and stone front, gas and electric fixtures, furnaces, gas ranges, hardwood finish, mantels, sideboards; cost \$10,000.

Architect A. G. Lund: For Engstrand, Lothgren & Co., a three-story apartment house, 55 by 104 feet in size; to be erected at 6356 South Peoria street; to be of pressed brick and stone front, have oak and pine finish, mantels, sideboards, steam heating, gas and electric fixtures, gas ranges and fireplaces, electric bells, speaking tubes, tile and marble work; cost \$30,000.

Architect Friedrich Foehrer: For Henry F. Wendt, a three-story and basement flat building, 25 by 65 feet in size; to be built at Sheffield avenue between Waveland avenue and Grace street; Bedford stone front and porch, copper cornice, oak finish, mantels; cost \$8,000.

Architects Flower & Hays: For W. S. Gooding & Co., two three-story flat buildings, each 50 by 70 feet in size; to be erected at 1647-1649 and 1648-1650 Congress street; Bedford stone fronts, oak finish, gas ranges and fireplaces, refrigerators, mantels, sideboards, consoles, steam heating, electric light; cost \$30,000. For W. F. Walker, a three-story flat building, 30 by 70 feet in size; to

be erected at Greenwood avenue; Bedford stone front, oak finish, mantels, sideboards, gas and electric fixtures, tile roof, etc.; cost \$7,000.

Architects Flanders & Zimmerman: For G. F. Swift, a three-story residence, 55 by 85 feet in size; to be erected at the corner of Ellis avenue and Forty-ninth street; to be of pressed brick with terra cotta trimmings, have fine hardwood finish, specially designed mantels, sideboards and consoles the best of nickel-plated plumbing, gas and electric fixtures, gas ranges and fireplaces, steam heating, electric light, laundry fixtures and driers, etc.

Architects Burton & Gassman: For William Lyon, a two-story, basement and attic residence, 25 by 72 feet in size; to be erected at Douglas boulevard near Homan avenue; to be of buff Bedford stone front, have hardwood finish, hot-water heating, gas and electric fixtures, electric light; cost \$10,000.

Architect C. M. Palmer: For Harris & McGimsie, a three-story apartment house, 75 by 88 feet in size; to be erected at the northwest corner of Greenwood avenue and Fifty-fourth street; to be of pressed brick and stone front, have hardwood finish, steam heat; cost \$35,000.

Architect Oliver W. Marble: For J. H. Christian, five two-story, basement and attic residences, 100 feet front; to be erected at Sixty-sixth street and Greenwood avenue; to have Bedford stone fronts, hardwood finish, steam heat, electric light, gas ranges, mantels, consoles; cost \$30,000. For H. W. Christian, a six-story warehouse, 48 by 100 feet in size; to be erected at 6152-6154 Wentworth avenue; pressed brick and stone front, elevators, electric light, the necessary plumbing, etc.; cost \$25,000.

Architect E. H. Turnock: For Frederick A. Bartlett, four three-story and basement flat buildings, 25 by 65 feet each; to be erected at Congress street near Albany avenue; to be of buff Bedford stone fronts, have oak finish, modern plumbing, furnaces, gas fixtures, mantels; cost \$30,000.

Architect Arthur Foster: For McGuire & Foster, a three-story flat building, 38 by 67 feet in size; to be erected at 530 Fiftieth street, to be of pressed brick and stone front, have steam heating; cost \$15,000.

Architects Shepley, Rutan & Coolidge: For Chicago Orphan Asylum, at the southwest corner of Grand boulevard and Fifty-first street, a two-story and basement building, 60 by 130 feet in size; to be of pressed brick, stone and terra cotta, have all improvements, electric light, etc. Also two-story school, 30 by 80 feet in size; and four two-story cottages, 40 by 50 feet each; to be of pressed brick and stone, slate roofs, etc.

Architect Olof Z. Cervin: For Lutheran Augustan Book Concern, a four-story publishing house, 32 by 90 feet in size; pressed and molded brick, stone trimmings, mill construction, metal lath, fireproof stairs, iron posts and girders, fireproof vault in all stories, steam heat, electric elevator, water closets, etc., plate-glass front, tin or gravel roof, electric and gas light and fixtures, Venetian blinds on south and west; cost \$15,000, exclusive of shelving and desks; architect will let all contracts.

Cleveland, Ohio.—Permits issued during 1897 numbered 3,011, estimated cost, \$3,407,803; an increase of cost over 1896 of \$262,202.

Detroit, Mich.—Architect George W. Meyers: For William Gutow, two-and-one-half-story, brick-veneered residence; to be built on Smith avenue near Woodward; cost \$5,000.

Architects Malcolmson & Higginbotham: For Collins B. Hubbard, terrace of ten two-story residences, 60 by 180 feet in size; to be erected on boulevard; cost \$25,000. For Max L. Towler, three-story apartment building, to be erected corner of Vinewood and Baker streets; all modern conveniences and steam heat; cost \$15,000. For Board of Education, twelve-room brick schoolhouse, to be built on Mott avenue near Brush street; cost \$30,000.

Architects A. C. Varney & Co.: For Freud estate, a three-story, brick store building, 42 by 75 feet in size; cut stone trimmings, pressed brick fronts; cost \$10,000. For Library Association, Jonesville, Michigan, one-story library building. Three-story brick store building 33 by 117 feet in size; to be erected on Gratiot avenue; cost \$15,000.

Architect S. C. Falkinburg: For De Mann Bros., a two-story frame apartment building, 38 by 73 feet in size; to be built on Humboldt avenue; cost \$8,000.

Architect Edward C. Van Leyen: For John Geyman, two-story frame residence, to be erected on Canfield avenue. For William Mathews, double residence, to be built on Field avenue; brick, stone trimmings; cost \$5,600. Four-story apartment building; steam heat, pressed brick and terra cotta; cost \$25,000. For Huettelman & Kraemer Co., a three-story, brick machine shop, to be erected on Catherine street; cost \$7,000. For John Ward, block of eight residences, 50 by 140 feet in size; to be erected on Thirteenth street; cost \$10,000.

Architect Julius Hess: For Parker & Webb, four-story packing house, 72 by 130 feet in size; to be erected at Twentieth and Rose streets; cost \$18,000.

Architect Harry Chamberlain: For Thomas McGee, two two-story frame residences, to be built on Seventh street; cost \$5,500. For Mathew Finn, two-story, double residence, to be erected on Horton avenue; cost \$7,000.

Architect Thomas W. Hyland: Two-story, brick and frame residence, on Palister avenue; cost \$5,000.

Architect Frederick T. Houk: For F. T. Houk, terrace of six brick residences, with stone trimmings, hardwood finish, and hot-air furnaces; 54 by 108 feet in size; cost \$25,000.

Architect Charles W. Kohler: For syndicate represented by W. H. Hodge, Niagara Falls, New York, four-story gray pressed brick sanitarium, sandstone trimmings, all modern conveniences and steam heat; 40 by 122 feet in size; cost \$40,000.

Architect George C. Zimmerman: For Rudolph Hirt, Jr., three-story brick cold storage, cut stone trimmings, equipped with elevator and machine for manufacturing ice; 50 by 64 feet in size; cost \$15,000.

Architect Edward C. Van Leyen: For A. A. Gray, gray and brown brick apartment house for eight families, with all modern conveniences, hot-water heating, etc.; 45 by 100 feet in size; cost \$25,000. For Thomas J. Sarvene, two-story brick double residence; cost \$6,000.

Architect Frank G. Baxter: For John McIsaac, two and one-half-story brick veneered residence; cost \$55,000.

Architect S. C. Falkinburg: For E. W. Wardell, pressed brick double residence, stone trimmings and slate roof, steam heating, finished in hardwood throughout; 40 by 60 feet in size; cost \$10,500.

Architects Spier & Rohus: For Spier & Rohus, two and one-half-story field-stone residence, slate roof, hot-water heating, and all the appointments highest class; 32 by 45 feet in size; cost \$6,000.

Architects Stratton & Baldwin: For trustees Mariners Episcopal Church, three-story brick and stone warehouse of heavy mill construction, the basement and first story to be steel frame asphalt roof; 40 by 80 feet in size; cost \$15,000. For estate of George W. Hammond, block of two two-story brick stores; cost \$8,000.

Architects Kastler & Hunter: For Jeremiah C. Buckley, brick and frame double residence, finished in hardwood, steam heating; cost \$7,000. For Mrs. O. Wirth, two-story brick store and residence flats; 40 by 107 feet in size; cost \$7,000.

Architect Byron M. Wickes: For William J. Iuyckx, two-story brick veneered double residence; cost \$5,800.

Architects A. C. Varney & Co.: For Miss Mina L. Hocke, two-story brick double residence; cost \$5,000.

Architects Mason & Rice: For Thomas W. Palmer, three-story office building, of buff pressed brick and stone trimmings; 40 by 50 feet in size.

Architect George W. Myers: For Myers & Guton, two-story brick apartment house for eight families; 30 by 100 feet in size; cost \$10,000. For same, four two-story brick veneered residences; cost \$5,000.

Architect Leon Coquard: For St. Anne's Roman Catholic Church, brick and stone clubhouse, slate roof, with theater on top floor, bowling alleys in basement, and gymnasium; 56 by 130 feet in size; cost \$15,000.

Architect Alphonzo Van Deusen: For Hamilton, Carhart & Co., three-story brick manufacturing building, of substantial mill construction, Page hot-air system and electric lighting; 50 by 120 feet in size; cost \$10,000.

Architect William S. Joy: For Loren H. Crofoot, four-story apartment building for eight families, with all modern appliances and conveniences, asphalt roof, steam heating, etc.; 50 by 60 feet in size; cost \$25,000. For Mr. Simon, terrace of four two and one-half-story brick residences, with stone trimmings; 60 by 67 feet in size; cost \$8,000.

Architect Herman Pipp, Ann Arbor: For Dr. H. K. Lum, Ann Arbor, frame residence on stone foundation; cost \$6,000.

Architects!

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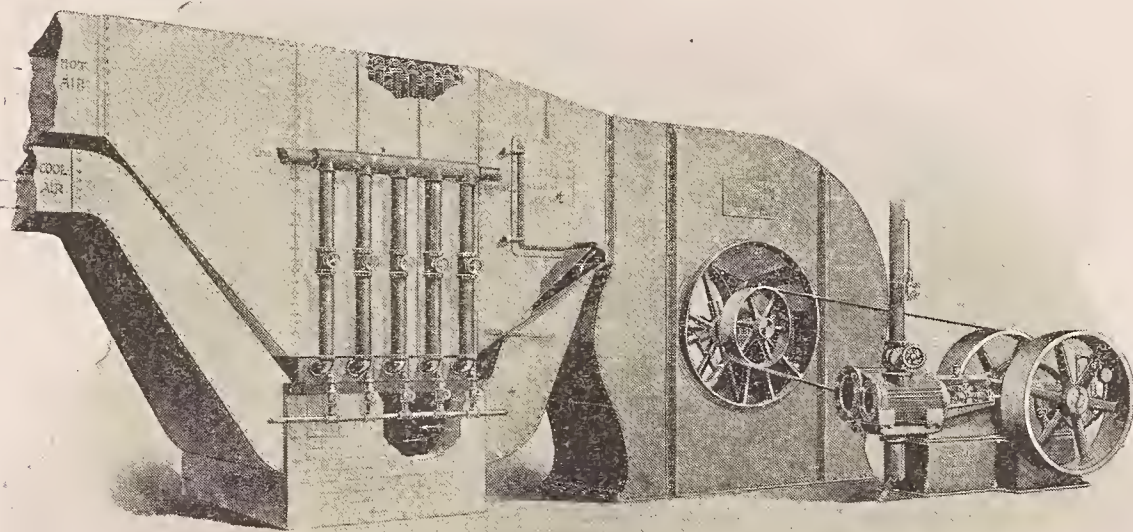
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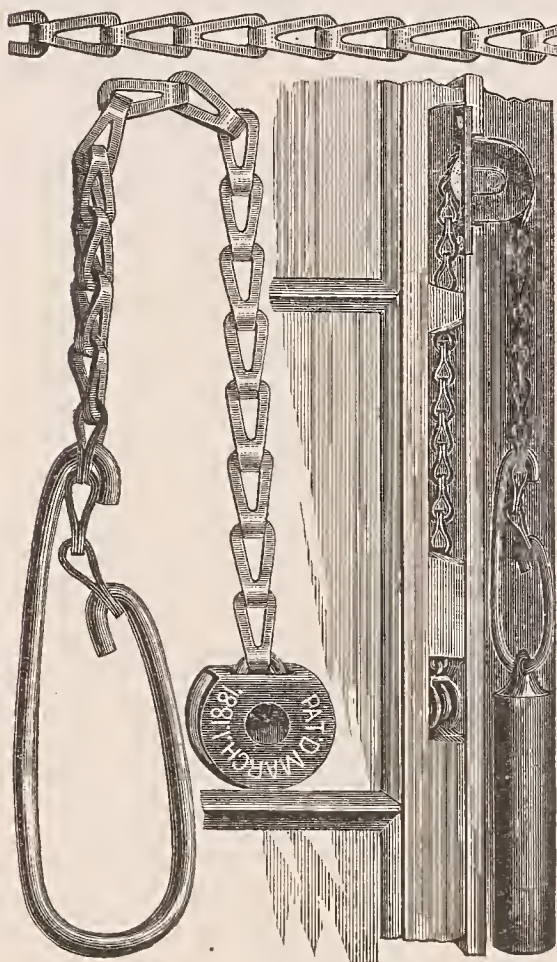
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THE INLAND ARCHITECT AND NEWS RECORD

Vol. XXXI.

ADVERTISERS' TRADE SUPPLEMENT.

No. 1

Valuable Publications Free.

Any architect can secure valuable books of reference without cost by sending for the catalogues of materials, etc., noticed from month to month in these columns. Large sums are spent on these catalogues, and they contain much practical information. Many are art productions. They may be obtained free on application to those issuing them. In writing please mention THE INLAND ARCHITECT, and oblige the journal and the dealer.

REQUESTS FOR CATALOGUES AND SAMPLES.

Those wishing catalogues and samples sent them by dealers in general may have their names inserted under this heading free of charge. The only recompense desired is that the dealers who send catalogues to these addresses give THE INLAND ARCHITECT due credit for business benefits that result.

TURGEON & LAFRENIERE, Architects, Room 10, No. 55 St. Francis Xavier Street, Montreal, Canada.

JULIUS FLOTS, formerly Fischer & Flots, 639 Unity block, Chicago.

H. NIEBERDING, civil engineer and architect, 158 East Second South street, Salt Lake City, Utah.

A BIG VENTILATOR.

Messrs. N. & G. Taylor Company, Philadelphia, have lately furnished the largest ventilator we have ever heard of. It has a total diameter of eighteen feet over all, the diameter of the neck being ten feet. It is on the Midland Beach Casino, at Midland Beach, Staten Island. It is the "Pancoast" make, which appears to be giving such great satisfaction throughout the United States. This same make of ventilator was also used on the new Astoria Hotel, New York City.

PORTLAND CEMENT TESTS.

The tests of Portland cement, usually made as to fineness, tensile strength at one and four weeks, setting, etc., do not afford an opportunity to ascertain if the cement under test possesses other qualities which for practical purposes are equally if not more valuable. The customary tests of cement give no evidence regarding its strength when mixed with a larger proportion of sand, regarding its uniformity, constancy of volume, durability, adhesiveness, impermeability, resistance to violent changes of the atmosphere, and to abrasion by wear. Information as to these qualities can only be obtained by the observation of long-time tests, the results of the employment of the cement in practice which must be taken into consideration, together with the results of the usual tests, to form a judgment of the relative value of several cements. The Dyckerhoff Portland cement will pass the requirements of all tests compatible with the best quality, and the well-known results of its employment for more than thirty years have demonstrated that it possesses in the highest degree all the qualities desirable in a Portland cement and justify the reputation that the Dyckerhoff is the best Portland cement made. Mr. E. Thiele, 78 William street, New York, is the sole agent for the United States for the Dyckerhoff Portland cement, and will be pleased, on application, to forward a pamphlet describing this cement more fully, and containing directions for tests, employment and testimonials. The Dyckerhoff Portland cement is for sale by Messrs. Meacham & Wright, No. 98 Market street, Chicago, and by the leading dealers in building materials throughout the country.

A GREAT CORPORATION REPORT.

An annual report of a great corporation, transacting a national business, is instructive and interesting; the former as showing the actual condition of trade for the year past, and the latter as revealing to some extent the means and methods whereby a gigantic manufacturing and mercantile institution is

built up and conducted. The fifth annual report of the General Electric Company, covering the fiscal year ending January 31, 1897, has just been issued.

President Coffin states that conditions have been such as to curtail operations in the establishment and extension of power and lighting plants, and rather to enforce the practice of great economy on the part of the company's customers. As a result, the shrinkage in orders received by the company was very marked, especially during the latter half of the year. Writing as he does under date of April 27, 1897, Mr. Coffin is able to say that the volume of business secured by the company for the first three months of the current year is slightly in excess of that for the same period in either of the three previous years. When it is understood that the gross earnings of the company for the year ending January 31 were \$12,820,395.87, the significance of a falling off of even a small percentage is apparent.

The General Electric Company operates manufacturing and electrical works at Schenectady, N. Y.; Lynn, Mass., and Harrison, N. J. During the year the company has added one large factory of brick and steel construction to its plant in Schenectady, and has completed another which was commenced in 1895. Its patents cover every conceivable electrical device, and its manufactures are equally varied. During the year there was expended for acquiring new patents and in patent litigation \$349,919.20. The patents, franchises, good will, etc., of the company are computed to be worth \$8,000,000. The total capital stock is \$34,712,000. The company owns factory plants worth \$3,400,000; real estate valued at \$643,016; stocks and bonds of street railways which they have equipped to the amount of \$8,545,795, and notes and accounts receivable, \$4,578,600. These are only a part of the assets of one of the greatest electrical concerns in this or any other country.

TRADE NOTES.

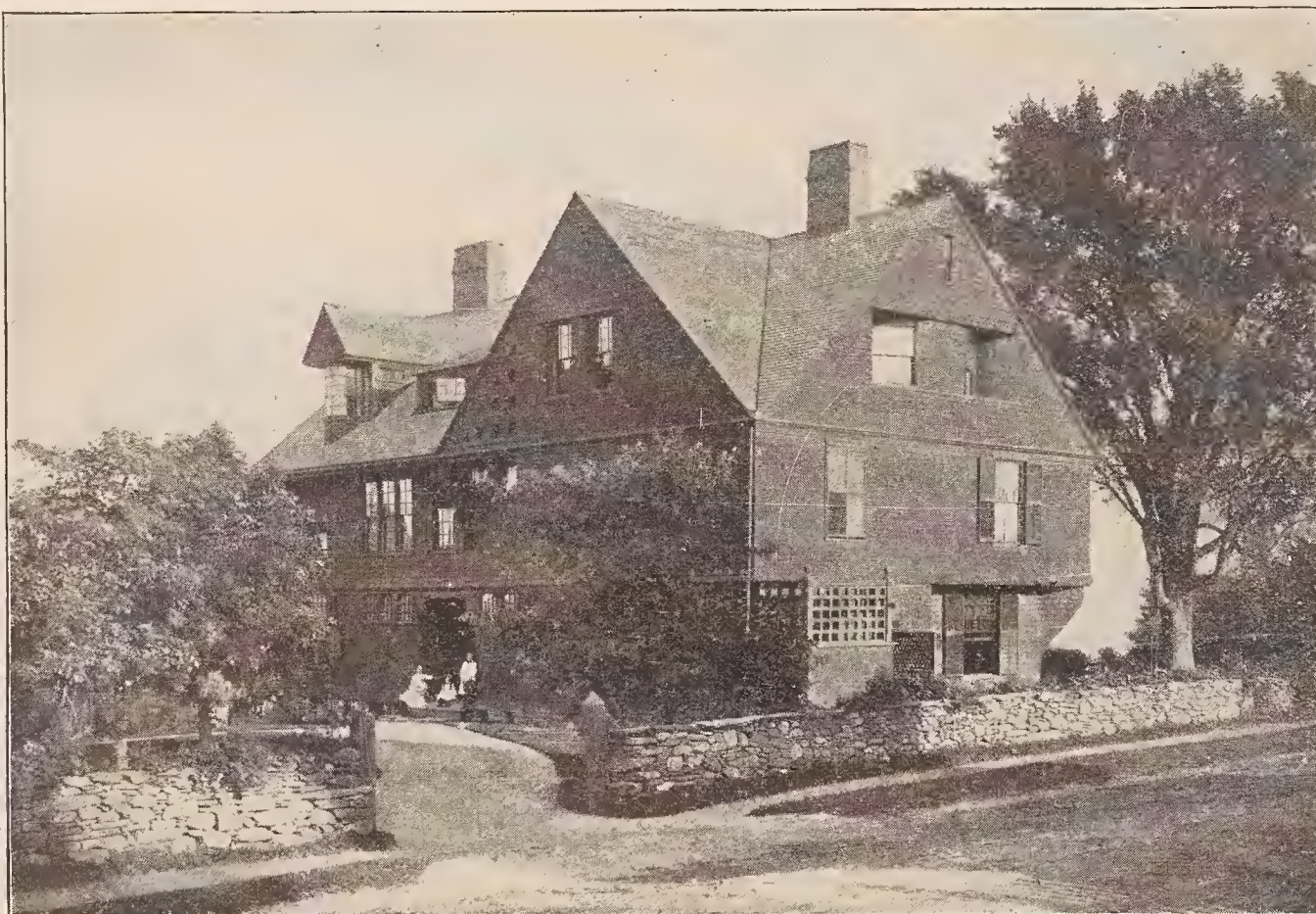
THE Buffalo Forge Company, of Buffalo, New York, have just received orders to build the fans and engines required for Torpedo Boats Nos. 12 and 13. Four blowers are required for this installation. The engines are direct-attached to the fans; every fan is of a special design to suit the space in which it is to be placed. The capacity of each fan provides for supplying air for 900 indicated horse-power of boilers. The system of forced draft is the inclosed stokehold, air pressure being about three inches. The engines are of a special type, having inclosed cylinders to prevent dust getting into the reciprocating parts.

AN objection which has heretofore been made to the brilliant finish of enameled brick, that for some purposes it presented a dazzling reflection where a somber surface would be more desirable, has been met by the production of an entirely new brick, in which the same hard finish and cleanly qualities are retained, but a dull surface, much like that of the ordinary pressed brick, is presented. The same variety of colors can be obtained, as also a mottled effect which is highly praised. This latest product of the brickmaking art is by the Tiffany Enameled Brick Company, who are always progressive and constantly on the watch for new effects in their line of manufacture.

THE Illinois Steel Company is now manufacturing at its North Works a "Steel Portland Cement," so called because made of blast-furnace slag. This is not a new product, as cement has been similarly manufactured in Europe for many years. The European cement has been used with satisfactory results in some structures of great importance, like the great seawall on the Yorkshire coast, England, the German

parliament buildings at Berlin, and the great waterworks conduit at St. Louis, Missouri. This latter undertaking required 500,000 barrels of cement to complete it, and so satisfactory was the furnace-slag cement there used that it gave an impetus to the manufacture of this material by a great and conservative corporation like the Illinois Steel Company. The excellence of a cement of this kind is shown by a uniform color and quality, fineness, strength when tested with sand or used in practice; freedom from lime, which is a common cause of cracking; stability, which is tested by boiling; stainlessness, smooth surface when finished, ease in working, resistance to the usual chemical and physical tests, increase of strength with age, etc. All these excellences, and many more, are claimed for the "Steel Portland Cement." In proof of its good qualities, the manufacturers state that they use it themselves in work of the greatest importance to the exclusion of all other high-grade cements, and that relying on thorough tests in laboratory and in practical work for years, they are now willing to stake their reputation as steel producers on the value of this other important building product. Many architects and engineers of the highest standing have indorsed this cement after a careful trial of it. It has been used successfully in bridge construction, in large office buildings, for heavy concrete work of all kinds, for fireproofing of buildings, lining mud-drums of boilers, laying brick and stone; in short, for all purposes requiring a high-grade Portland cement.

MANTELS and fireplaces, which are always a problem of more or less difficulty to the architect, are treated in royal manner in "The Open Hearth," a catalogue of designs of brick and terra cotta fireplace mantels, published by the Boston Fire Brick Company, Fiske, Homes & Co., managers, Boston. The subject is well worthy of the artists' best efforts and the publishers' most liberal enterprise, and in this treatise neither of these requisites have been begrudgingly bestowed. "The Open Hearth" is one of the most beautiful trade catalogues it has ever been our good fortune to review. It cannot be accurately described in the limits of a brief notice. Suffice it to say that its excellence consists in a very accurate and attractive presentation of the subject of mantels, and in the exceptional typography of the book itself. Twenty-eight full-page illustrations of mantels and fireplaces are shown, each representing a distinct and separate design in brick and terra cotta. Fiske, Homes & Co.'s aim is to furnish to architects, builders and owners a choice of many artistic designs or ready facilities for the making of special designs, if desired, the work in every case to be constructed with their stock terra cotta moldings, which are interchangeable in all their catalogue designs or can be worked into an infinite variety of special forms. The well-known disadvantages of special designs in terra cotta, namely, that they are expensive and are attended by much uncertainty as to perfect and prompt production, especially in the richer and more beautiful colors burned in the open fire, are intended to be obviated by this method of wholesale design and manufacture. The work is burned in a variety of soft, attractive colors, and in such quantities that for a given fireplace the manufacturers can cull to a uniformity of shade that cannot be attained in any other way, particularly in "fire-flashed" material. This method is in marked contrast to special manufacture, where "off-color" pieces represent absolute waste, because useless in other designs. It would seem that in this effort of Fiske, Homes & Co. nothing in the way of practical mantel building to suit all sizes and situations has been overlooked, and that it is destined to be of great assistance to architects and builders.



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